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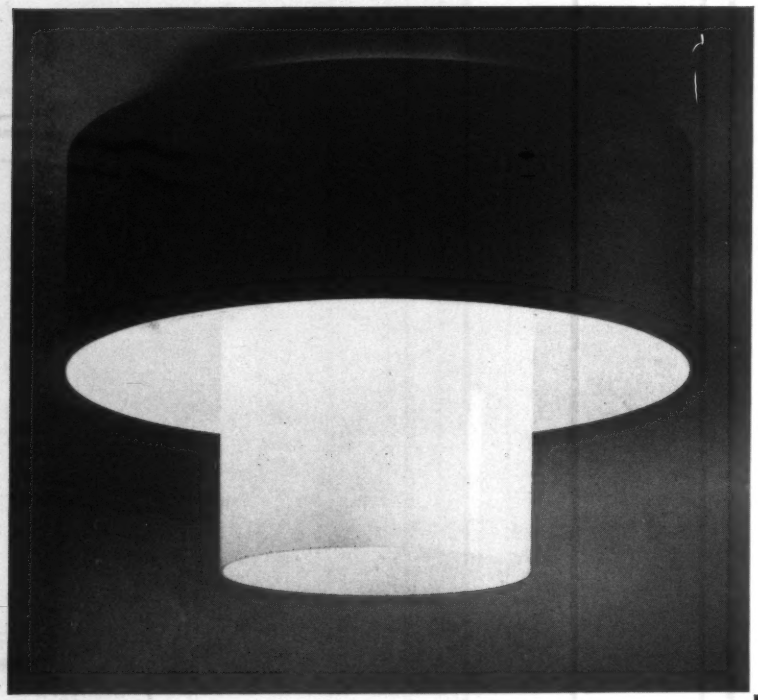

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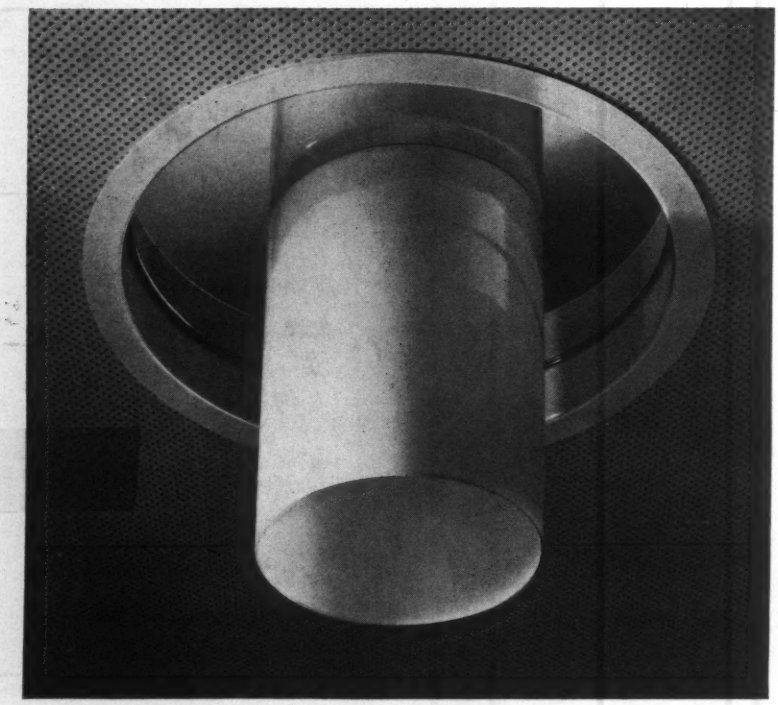

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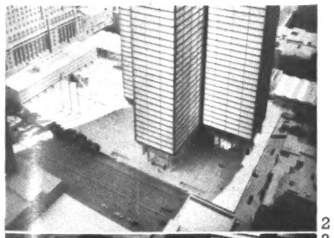
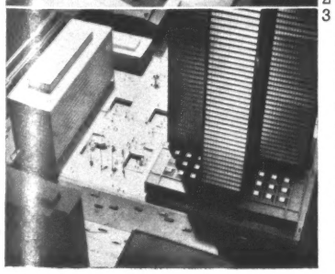
1

WORLD

PLACE VILLE-MARIE





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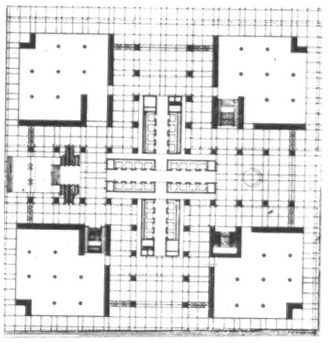
Although it has attracted most attention from being the first major enterprise of Webb and Knapp (Canada) Limited, the Place Ville Marie development in Montreal, now nearing the completion of its first stage, 1, should prove to be of more durable interest than that, because in Canada, as in the USA, Webb and Knapp means, in practice, William Zeckendorf for the finance and I. M. Pei for the architecture. Although the Place Ville Marie scheme is an enterprise in the grandest North American manner—effectively it is Grand Central Station plus Rockefeller Centre times two—it is interesting to see that the same client and rental pressures operate as on the projects of lesser mortals; the two comparative views, 2 and 3, of early and late models of the Plaza, show how much extra accommodation had to be packed into the site, and how an originally wide-open scheme became a fairly solidly built up one (though possibly to its advantage as townscape?).

The main feature of the scheme, of course, is Pei's forty-two storey office tower with its cruciform plan, 4, which is reckoned to offer nearly an acre of rentable floor-space per floor, while the relatively thin arms of the cross will assure better daylighting than would a square plan (or the various thick polygons now going up in London). Lacking from the information issued about the scheme so far is a good composite photograph or even optimistic drawn perspective showing what the tower will do to the skyline of down-town Montreal, but it is clear that, from the Campus of McGill University, it will *be* the skyline, since it is only two-and-a-half blocks away.



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5

OSTO-KESKUS

Finnish shopping centres

The West's most easterly outpost, Finland, has tended to be very restrained in its handling of one of the West's most characteristic activities, competitive commerce, and seems to be equally restrained in its handling of Western Commerce's newest outlet, the shopping centre, if the examples in *Ark* (12, 1960) are at all representative. At Munkshojden, outside Helsinki, the solution is a simple pedestrian square, 5, with a children's playground and a pyramidal central display feature. Although the shops on one side are housed in a single long structure, the architects —Pernaja, Pernaja, Kivikoski and Sandell—have grouped those on the other side in three large square units, to which there is direct access by car, 6.

6

Erkki Karvinen's solution at Kulo-

ACKNOWLEDGMENTS

COVER: Galwey Arphot. WORLD, pages 295–298: 1, Associated Commercial Photographers Ltd.; 2–4, *Progressive Architecture*; 5–12, *Arkkitehti Arkitekkten*; 14–16, 25, 28, *Progressive Architecture*; 17, 24, *Bauwelt*; 18–20, Landesbildstelle Rheinland; 21, Volker Wallgast; 31–34, *Architect and Builder*; 35, *Forum*. VIEWS AND REVIEWS, pages 299–301: 1–4, Galwey Arphot. FRONTISPIECE, page 302: Ministère Construction. UNDERGRADUATE ROOMS, BRASENOSE COLLEGE, OXFORD, pages 306–312: 1, 9, 11, 13, Focus; 2–5, 7, 12, 14, 15, Galwey Arphot; 6, 8, 10, Powell and Moya. EXETER ROOD SCREEN, pages 313–317: 6, 10, National Buildings Record: 7, Herbert Felton; 8, F. H. Crossley; 9, F. Sumner. NEW HOUSING IN THE PARIS SUBURBS, pages 318–323: 7, 8, 10–13, Ministère Construction; 9, 16, Jean Biaugeaud. PARLIAMENT BUILDING, STUTTGART, pages 324–334: 1, 4–14, Friedrich Zieker; 2, Albrecht Brugger. INTERIOR DESIGN, pages 335–339: 1–6, Galwey Arphot; 7, 10, Minerva Art & Photographic Service; 9, 12, Douglas C. Morris. ROBERT MYLNE AT THE ACADEMY OF ST. LUKE, pages 341–342: 1, The Cooper Museum, New York; 2–4, RIBA. THREE SUBURBAN HOUSES, pages 343–350: 1–5, Douglas Whittaker; 6–13, Behr Photography; 14–19, Galwey Arphot. MISCELLANY, pages 351–359: Exhibitions, 1, Gimpel Fils Gallery; 2–5, New London Gallery; 6–9, James Mortimer. Credit, Toomey Arphot. History, 1–6, Eric de Maré; 7, Country Life; 8, National Buildings Record. Plants, 1, 5, J. E. Downward; 2, 3, Tania Stanham; 4, Peter Lloyd. Townscape, Toomey Arphot. SKILL, pages 360–364: 3, Building Research Station; 4–6, Stewart Bale.

The Cover *shows the beginning of the low block of Powell and Moya's extensions to Brasenose College, Oxford, as seen from the underpass below the five-storey block. As will be seen, this is a complex solution to an unusually complex problem, in which the architects have sought less to conserve a collegiate yard under glass, so to speak, by raising all the accommodation above it on stilts, than to transform it into something that seems larger by means of stopped views and veiled vistas, as revealed in the plans and further illustrations on pages* 306-312.

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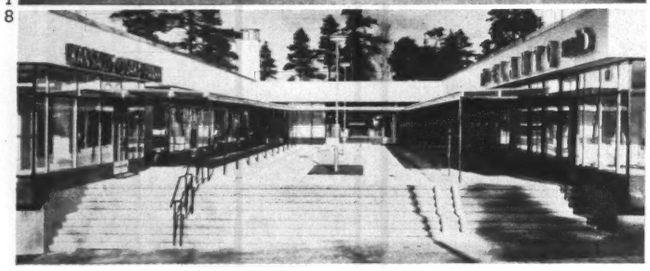
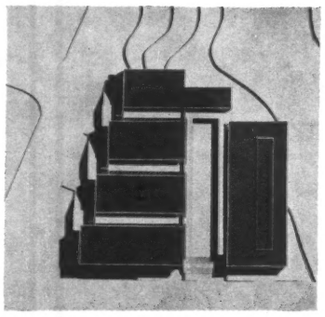


8

Ostokeskus

saari, is more complex, because a sloping site enables him to raise the main shopping floor above direct basement access from the street for servicing, 7. A separate staircase on this side serves each of the three covered shopping arcades that run back to the main concourse, 8, which has a more ceremonial flight of steps rising from the street at the right in 7. The resulting plan, 9, gives plenty of display-window footage within a relatively small site, and nearly all of it under-cover, while the architecture is, in detail, refreshingly straightforward and bold. Karvinen's other *Ostokeskus* (the Finnish term for such a centre) at Gamlas, also has a split section for basement servicing, 11, but the plan, 10, is simpler, the shops being grouped around an open piazza cum parking lot, giving something of the aspect of an English New-Town market-place, 12, an effect enhanced by the less forceful architecture and detailing.



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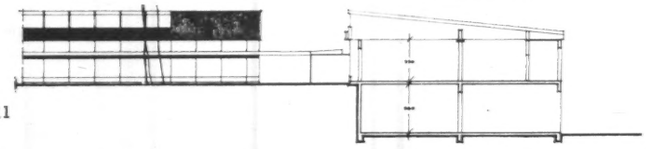

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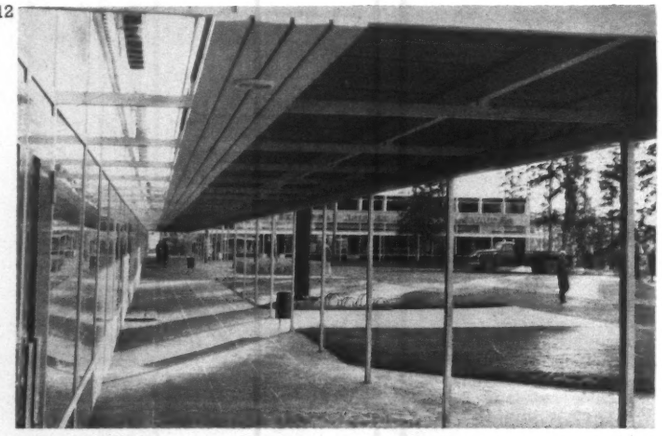
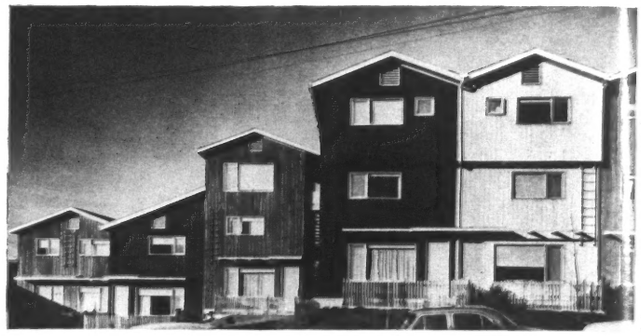


THE STREET-DECKS OF SEATTLE



14

The Bay Region Style, which seems to have been lying doggo since Eastern America began to monopolize the headlines, has made a sort of collateral comeback in Bassetti and Morse's staff housing, 14, for the University of Washington Hospital in Seattle. Built on a fairly sloping site, these wood-frame houses are in some cases plain two-storey cottages, but in others they have three storeys with a separate apartment in the loft, reached by a simplified street-deck on the back or courtyard side, 15. These upper rooms and their approaches have an airy aspect that one might be tempted to compare, 16, with Picasso's old Bateau-Lavoir, had not *Progressive Architecture*, in publishing the scheme (June, 1961) used the term 'fishing village' and compared the general feeling to a houseboat community with its inter-connecting gangplanks. English readers will have no difficulty in making mental comparisons with the net-houses at Hastings (cf. AR September, 1957) but a more instructive comparison might be with Tayler and Green's village housing. Not only is a similar use made of different colours to reinforce and diversify the architectural composition, but a similar sophisticated exercise in the creation of a quasi-vernacular is clearly in hand.

15

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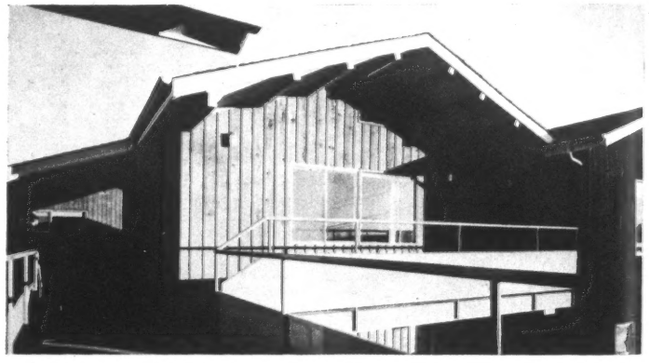
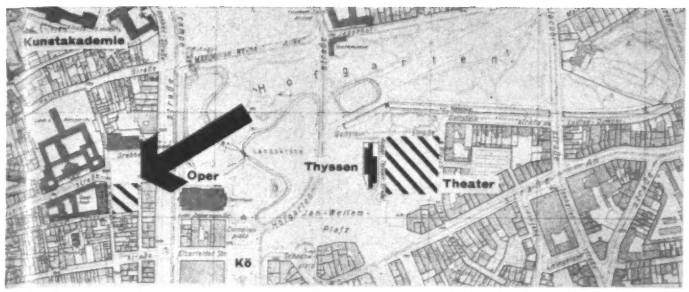


GERMAN MOBILITY

Man and motor in Dusseldorf and Lünen

We are building a parking garage with art centre attached—thus *Bauwelt*, rudely, on the subject of the competition for a new *Kunsthaus* in Düsseldorf. Many of those who entered the competition seem to have felt that the jibe was justified. The site, next to the Andreaskirche (arrowed in *Bauwelt's* plan, 17), is already a parking lot, and the terms of the



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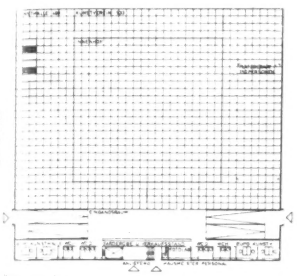
mobility



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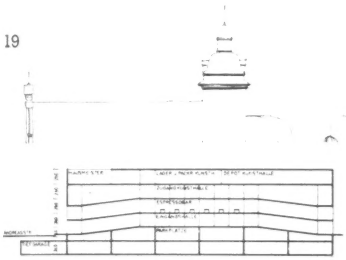

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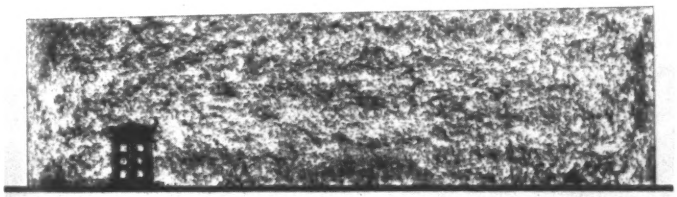

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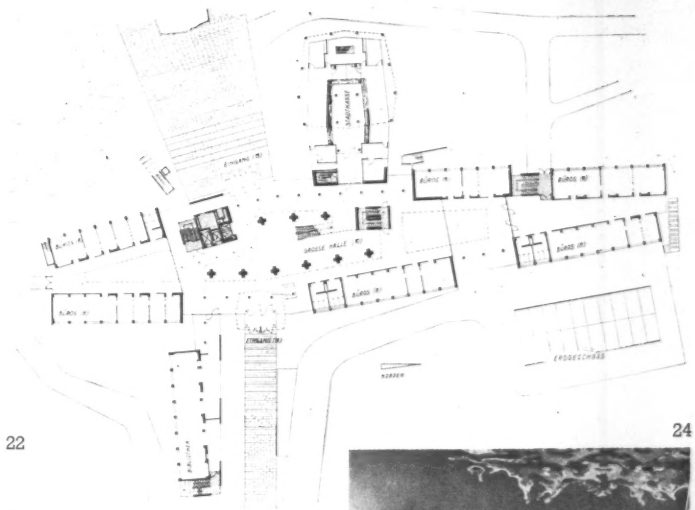
competition made it clear that it was to remain so—'now we know,' cracked *Bauwelt*, 'what an art centre is: two floors at least 4 m. high, over a garage and parking-lot.' *Bauwelt* also did a rough breakdown of the entries into three major categories—eighteen square boxes with annexes, twenty-nine square boxes with central courts, thirty L-plans and a handful of irregular shapes.

The winning scheme, designed by Bruno Dammann, is an almost literal rendering of the two-floors-over-parking theme, but expressed as a completely dead-pan rectangular package, 20, relieved only by a pair of classicizing doorways (and some inconsequential windows on the side away from the church). This almost monolithic exterior is achieved by the use of a courtyard plan, with most of the public areas lit from the central court, 18, and vertical circulation by ramps, 19, which—if well detailed—could add an air of humanity and grandeur to a building that otherwise is (through no fault of the architect) a monument to the murder of civic design by the automobile.

Although *Bauwelt* has seen fit (and not suprisingly) to treat the operation as something of a joke, this is no laughing matter. The great Rhine-Ruhr conurbation of which Düsseldorf forms part is already so heavily motorized that it faces, before the rest of Europe, complete Los Angelization. Parking-space is already at a premium, and the determination of the city fathers to keep their *Parkplatz* is as inevitable as it is praiseworthy, however ineptly this requirement has been expressed in the competition regulations. Nevertheless, as was shown by such previous exercises as the *Hauptstadt-Berlin* competition, we can look to Germany for imaginative solutions of the problems of mobility and civic design. While the new town-hall for the expanding town of Lunen, 21, does not tackle the automobile problem directly, its approach to pedestrian circulation suggests that some of the ideas stirred up by the Berlin competition are already ripe for incorporation in real buildings. The plan, 22, shows that the central office tower, 23, stands above an open hall which extends in various directions, making a kind of interior street which gives access to the offices of different municipal departments, and the interior view, 24, shows how well the architects (Werner Rausch and Siegfried Stein) have kept the street character of an otherwise ambiguous interior space—chiefly by the use of granite setts as the flooring material. Lunen, it will be remembered, is also the location of a typically 'a-formal' school by Hans Scharoun (*World*, December, 1960) and this town hall being clearly a work of the same persuasion, the town should soon present a fairly concentrated 'walking-seminar' on whether a-formalism works.



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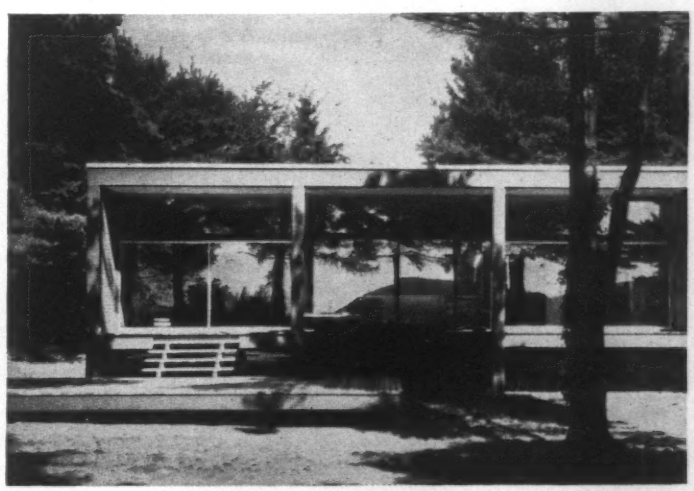
DECENT SQUARE HOUSES

There seems to be a fair chance that the example of Mies and Philip Johnson may have established a kind of decent middle style in US domestic architecture. It is not always easy to spot from outside the country, because it tends to get pushed out of the magazines by houses that are more obviously plastic, frantic or manic-depressive. Nevertheless, *Progressive Architecture* (May, 1961) produced a text-book example by Ulrich Franzen, with glazed ends, 25, and the almost mandatory near-symmetrical plan, 26,



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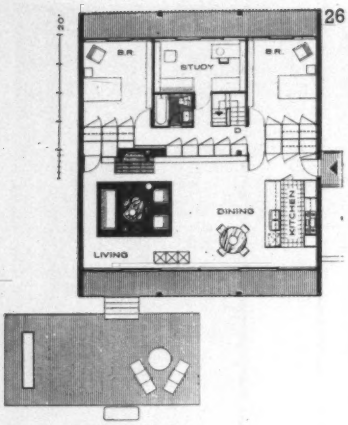

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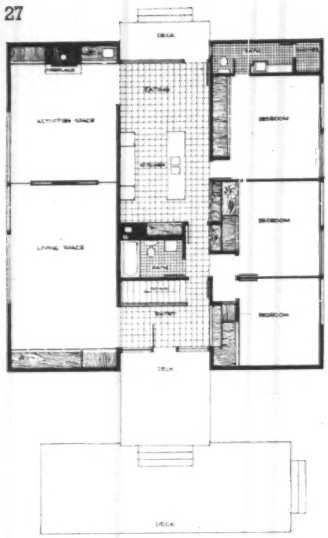

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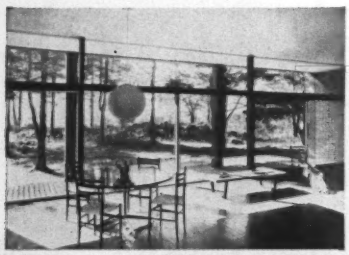
Decent houses



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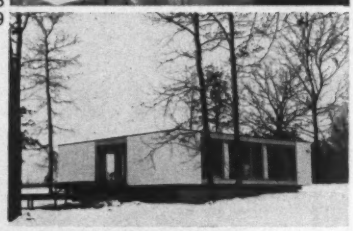
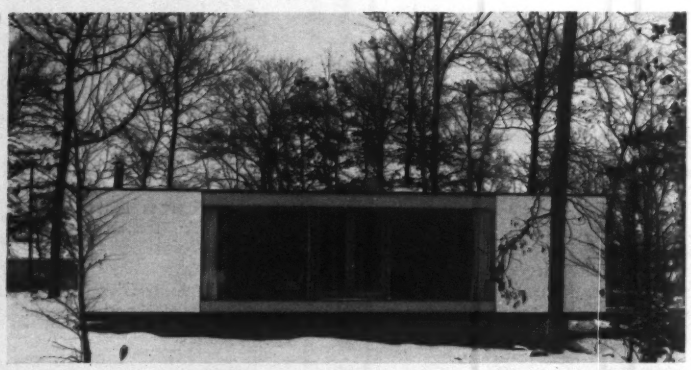


29

with off-lying 'Farnsworth' sitting-deck. The interior, looking out, 28, shows not only how text-book the spatial quality of the house is, but also a very good reason for having all-glazed ends—the New England landscape seems to have been created especially as a domestic view.

Farther inland the Michigan architect Joseph Savin has recently constructed for himself an equally simple prism, 29, with an even more symmetrical plan and Farnsworth deck, 27. If the symmetrical façades are a little less simple, 30, than Franzen's all-solid-one-way-and-all-glazed-the-other, it is because the house has a larger and more complex functional programme, but one which this same style can express equally well.



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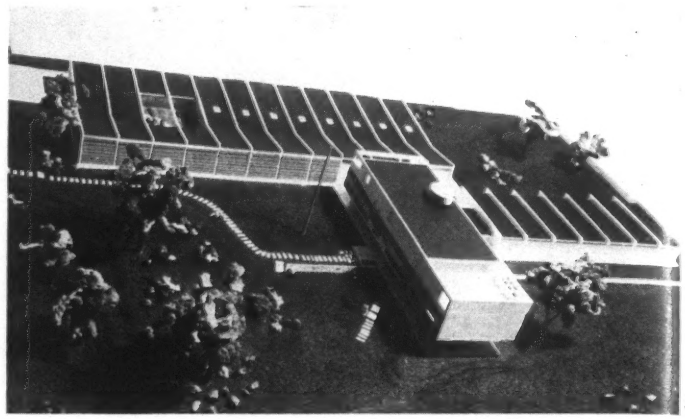
RHODESIAN ARCHIVE

A client's brief that calls for traditional local character in an area that has practically no old architecture asks a lot of an architect: contrariwise, a client's brief that has worked out in detailed and diagrammatic form the functional and circulatory needs of a building that has hardly any specifically-designed ancestors, is almost more than an architect dare expect. Hawke and Pereira got both when they took on the design of the National Archives Building, 31, for Rhodesia and Nyasaland. The traditional character they approximated (via some justifiable casuistry) by equating *beton brut* with the famous rough masonry of the great walls at Zimbabwe. The functional brief resulted in the simple distribution of blocks seen in the model photo, 32, with the main administrative building in the centre, the library proper to its right and the record stores at the back. Undoubtedly the greatest architectural success of the scheme is the main block, which—traditional or not—will strike European eyes as having an unmistakably Anglo-African quality with its bands of concrete and brick, 34, a façade pattern that stands up brilliantly to the acid test of floodlighting, 33.

31



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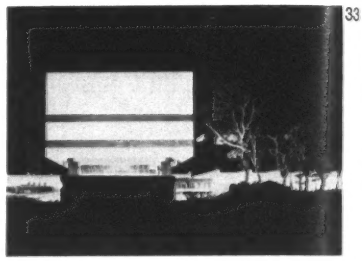

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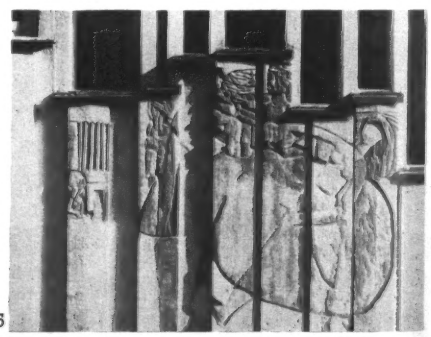
and now—

neo-viking?



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The Swedish magazine *Form* has a status and function similar to that of the CoID's *Design*, but occasionally strays from consumer goods and problems of public taste into less taxing fields. In May (5, 1961) it illustrated the summer retreats of three Swedish architects. Although two of these were of the converted-farm or simple-wooden box type that might be expected, the other, by an architect bearing the respected name of Ahlsen (not Tore, his brother Erik) offered some surprises, most notably in that its outside loggia appears to have the earliest example of the up-and-down window, since done to death by minor Corbusiasts and followers of Ignazio Gardella. Whether the stave-church-type carvings below the windows, 35, represent a Neo-Viking trend comparable with Neo-liberty is not, at present, a subject for alarm—for even an architect, like anybody else, has a right to private fantasies in such private places.

views and reviews

MARGINALIA

BREEDS PLACE

The name of Joseph Kay can hardly be said to resound in the annals of British architecture, yet he deserves to be remembered; he was a founder of the Institute of British Architects, he laid out Camden Town and Mecklenburgh Square, of which he designed the East range. And he designed Pelham Crescent, Hastings, his masterpiece and one of the chief ornaments of British sea-side architecture. Had he been famous, there is no doubt that his name would have attached, by association, to Pelham Crescent's two flanking wings, Pelham Place and Breeds Place, and there would have been no nonsense about pulling either of them down.

As it is, however, Pelham Crescent is being shorn of its supporters. Pelham Place is gone, and now the surviving houses of Breeds Place (Nos. 1-6) are under threat as well, 1.

1

Whether by Joseph Kay or not, they follow the style of the Crescent in a simplified way (compare 2, from Breeds Place, with 3, from the Crescent) and form a coherent and dignified composition in themselves, 4, above the bijou inanities of the municipal foreground. But without these supporting wings the Crescent shrinks back from being a town-planning triumph to a quaint olde-worlde incident in an undistinguished street, and the preservation of the Crescent (now in hand) becomes little more than an exercise in historical embalming.

Yet the future for Breeds Place is not bright—the houses are listed under Section 30 of the 1947 Act, but no longer represent an economical investment for a modern property operator. Notice of intention to demolish has not been followed by a Preservation Order, although the condition of the houses is not beyond repair and modernisation, and the local authority are not interested (apparently) in adding responsibility for Breeds Place to their responsibilities in connection with the restoration of Pelham Crescent. The intentions of the developers remain obscure, and it is not known whether their proposed re-development will be submitted to the RFAC. The whole sorry story is yet another example of the inability of our rulers and governors to see and cherish towns, or even parts of towns, as a whole—or even to see, in the narrow context of local economics, that the piecemeal destruction of the Pelham complex is another step in the piecemeal destruction of Hastings' tourist trade.

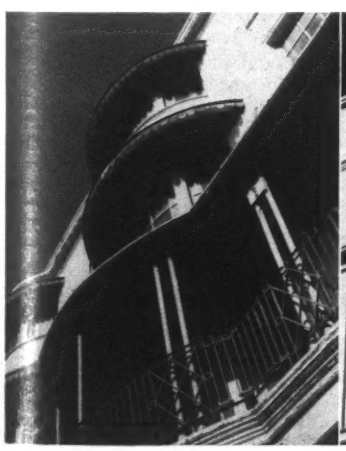
4

FARM BUILDINGS PANEL AT CoID

Readers of John Voelcker's article on farm buildings in the REVIEW for September 1960 will be reassured to find him among the members of the CoID's new Farm Buildings Advisory Panel. The other members include two more architects—Michael Shepherd and Edward D. Mills—F. J. Stratton, chairman of the Fatstock Marketing Corporation, Sir Gordon Russell, and two members of the CoID staff—J. Noel White and Peter Whitworth. The panel seems a little thin on practising farmers and particularly so on those specialized agro-industrialists, such as broiler operators, who constitute the worst landscape problems at present. No doubt, when the panel has discharged its immediate task of surveying the products and structures already on the market, and turns to positive recommendations, it will avail itself of specialized advice or even co-opt more members.

BATSFORD PAPERBACKS

The arrival of packaging and impulse-outlets in the book trade has tended to bully the art of re-issuing into one standard format, the paperback—a format in which works on architecture tend to suffer from excess compression of the illustrations unless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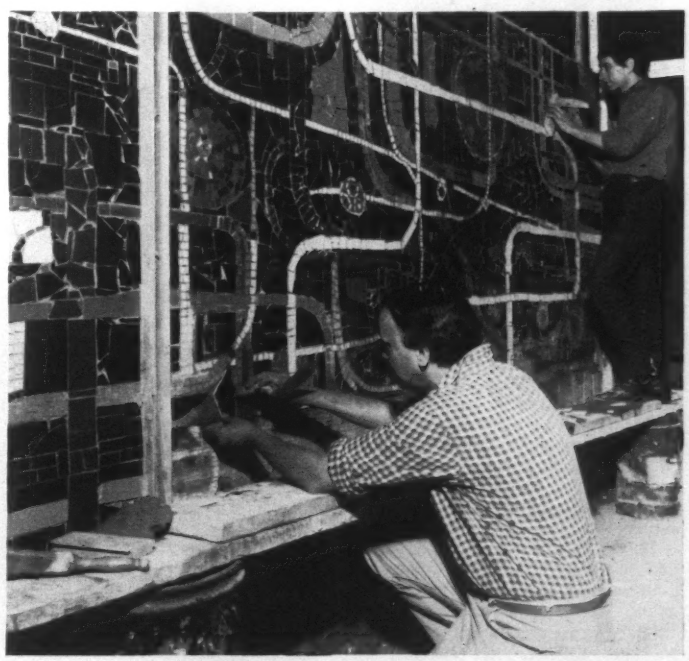
5, Fred Millett (foreground), co-author of the article on New Mural Techniques (*AR, August,* 1961), *working with an assistant on a mosaic panel (one of a pair) in the entrance hall of the new Abbey post office, Westminster (architect, W. S. Frost, of the Ministry of Works).*



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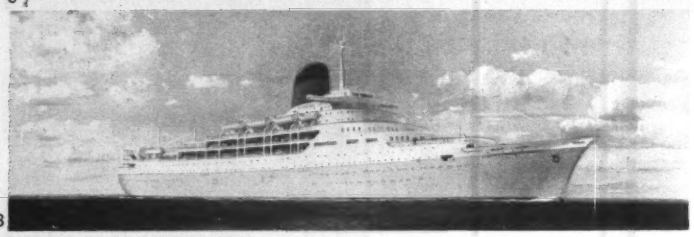

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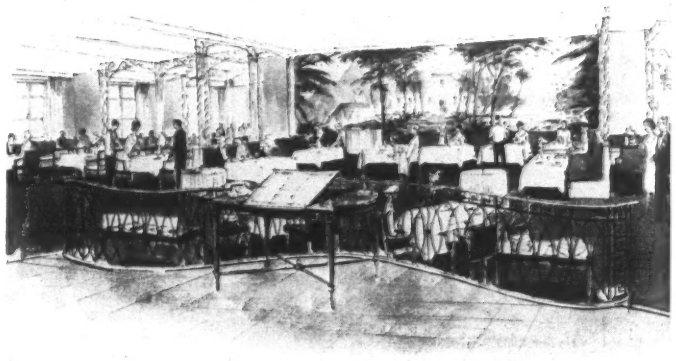


9

THE CASTLES ON THE SEA

It is clear that the excellence of Canberra *and* Oriana (*AR Sept., Oct.,* 1961) *gives no grounds for complacency about the rest of the new and projected ships for British lines, and that the lessons learned by P & O-Orient Line still need urgently to be learned by the rest of the business. The newest Union Castle liners in particular are enough to drive those who mind about Britain's reputation for good design to despair. A more absolute piece of visual escapism than the neo-Classical style drawing-room shown in* 6 *would be hard to find; it is doubtful whether the anti-nautical trend in British ship interiors have ever gone further than in this tired furnishing of RMS* Windsor Castle*—unless it will be in the Union Castle Line's other new mail boat, the* Transvaal Castle.

7, the dining room of the Windsor Castle, *in a Grand Hotel style that even Grand Hotels have abandoned.*

8, artist's impression of the Transvaal Castle. *The smart, modern and businesslike lines of the exterior can only heighten dismay over the gutless design of the interior.*

9, a sketch of the dining room of the Transvaal Castle, *due to be put in service in* 1962. *Escapism has indeed gone further, as the dining room 'is in the nature of a garden surrounding the house' visible in the mural on the back wall.*

views and reviews

specifically conceived for this form, as was *An Outline of European Architecture* for Penguin. Batsford's two reliable old war-horses, *English Cathedrals* and *Parish Churches*, however, have survived reduction to pony format remarkably well in a new five-shilling series that also includes 'landscape' works like Sacheverell Sitwell's *Spain* and books on veteran and vintage motor-cars.

Cox and Ford's *Parish Churches* is not quite such an old war-horse as some might remember it—this is Bryan Little's revision of the original text, completed in 1960, and notices and even approves such post-Gothic manifestations as Baroque tombs and St. Chad's, Shrewsbury, though it eschews any discussion of churches built after 1840. Thus it is really a visitor's introduction to traditional parish churches, rather than an architectural study. John Harvey's *English Cathedrals* is a horse of a different colour with a very definite view of what is and what is not an *English* cathedral: the last and shortest chapter is entitled *Renaissance and Conclusion*, and St. Paul's, while acknowledged as a masterpiece *sui generis*, is discussed as an example of a surviving Gothic tradition in all save its decoration, and no later cathedral is discussed or illustrated. On the Gothic cathedrals *pur sang*, Mr. Harvey is at his best, and these chapters make stirring reading.

EUSTON ARCH

At the time of going to press, the fate of the propylaeum of Euston Station appeared to be sealed. The Cabinet remained firm in its decision to support the British Transport Commission's intention to demolish it to make way for an extension of the terminal station (AR November, 1960). Last minute appeals in the closing days of September were made by the Royal Fine Art Commission, The Victorian Society, Peers and Members of Parliament, but to no avail. Although no architect raised his voice in favour of its destruction, it is interesting to note that in the USA, where the celebrated classical hall of McKim, Meade and White's Pennsylvania Station is also under threat, determined modernists did support demolition—in Britain, only the *New Scientist*, depressingly enough, publicly supported the Minister's decision.

OBITUARY

EERO SAARINEN

The death of Eero Saarinen at the shockingly early age of 51 seems to have caught the mouthpieces of architectural opinion in attitudes of acute embarrassment, for his reputation was passing through a phase of hostility and suspicion, both of which were being even more freely voiced in the US than in Britain, where the cool reception of his Embassy building in Grosvenor Square was beginning to thaw. His achievement had been difficult enough for anybody, anywhere, to digest, if only for the way in which he combined a stunning professionalism in detailing with an apparent changeability of style that defied all attempts at analysis. The story of his transformation from a Miesian Machine-Aesthete at General Motors Technical Centre at the beginning of the fifties (the effective beginning of his career as a major figure) to a free-form sculpturalist at their end, is so much in the public domain that it hardly needs to be pursued here, but as it has remained more or less in step with a corresponding change of fashion among the younger elements of the profession all over the world, Saarinen has had to shoulder (like Socrates) unjust blame for the 'corruption of youth.'

If anything, youth found his changes of style even more incomprehensible than did his elders—young Miesians never forgave him for abandoning the hypnotic repetitions and fine drawn detailing of GM Tech Centre, while students at Yale would take visitors to see the Ingall's Hockey Rink as an example of a Yale alumnus who had gone astray. But Saarinen would have defended these unique solutions (which so flattered commercial patrons in search of a distinctive brand image) as the necessary consequence of unique problems, and by the end of his career the apparently unending supply of unprecedented building forms began to make it look as if he really might be judging every situation on its unique merits and evolving genuinely original solutions by going back to first principles and avoiding aesthetic prejudice.

Unfortunately, the wave of corporate and academic affluence that made these original solutions possible, also cushioned him—to some extent—from hard financial pressure, and his work from the middle fifties onward exhibits a manifest want of economy that seems to draw attention to every instance, however minor, of lack of absolute resolution in detail or in plan (shall we ever know how much modern architecture's ability to maintain its own standards of integrity owes to economic stringency?) and it should be noted that British proponents of 'the style for the job' were as vigorous in their criticism as were US advocates of stylistic purity. Nevertheless, the growing wave of recognition that

absolute functional honesty, and the exact service of human needs, will both militate against stylistic consistency may yet find in Eero Saarinen a patron saint or father figure whose inconsistencies could guarantee his legend a lively survival even when the memory of the great grey eminences has become a gallery of lifeless statues.

WALTER GODFREY

Walter H. Godfrey, historian and antiquarian, author and editor, restorer of ancient buildings, died in September in his 81st year. Of his multiple and scholarly activities, the two for which he will perhaps best be remembered are his editorship of the London Survey Committee's volumes and his directorship of the National Buildings Record.

He himself wrote several of the Survey volumes (for it was as an historian of London that he was outstanding) as well as editing them, carrying on for many years the work begun at the end of last century by C. R. Ashbee. He only gave up the work when ill-health made it impossible to continue, and the Survey became the LCC Survey of London since the London County Council then took on the whole responsibility.

It was also ill-health that compelled Godfrey to give up, in 1960, the National Buildings Record of which he had been director since it was founded in 1941. His is the credit therefore for building it up so successfully during the difficult initial war years. He made of it a unique and invaluable photographic library, which would be more valuable still if the Government would allocate more money to it.

Notable among Godfrey's many books were his *History of Architecture in London* (1911) and his *Our Building Inheritance* (1944) which was a plea for the preservation and conversion to modern use of the thousands of small buildings in villages and elsewhere that give much of its character to the established British architectural scene.

Godfrey was in charge of the transfer of Crosby Hall from the City to Chelsea and showed skill and knowledge in restoring many old buildings. These included, after the war, two famous churches that had been almost destroyed by bombing: Chelsea Old Church (of which he was also the historian) and the Temple Church.

J.M.R.

BOOK REVIEWS

WHAT THE CAMERA SEES

PHOTOGRAPHY AND ARCHITECTURE. *By Eric de Maré. Architectural Press.* 50*s.*

In discussing the relationship of photography and architecture de Maré takes his stand on the words of Blake, 'I see through my eyes, not with them' and in this excellent book he goes forward to explain the part the camera has played and can play in building up a climate of opinion wherein modern architecture is understood. This is the very antithesis of the use of the camera as a 'seeing eye' in the reporting, recording sense; 'Dull useful work with which this book is not greatly concerned.' If the camera is to serve truly the cause of architecture, then it is not the perfection of a reporting technique that is required; instead, the photographer must cultivate his sensibility.

'Why complain,' he asks, 'that architectural photographs are sometimes contrived; that they do not reveal the true aspect of a building . . . an undistinguished structure can sometimes be made to appear like a masterpiece in a dream world.' The vision is real enough and its importance is in the stimulus and inspiration it supplies. If the photographer has captured, to quote T. S. Eliot, 'such a vision of a street as the street hardly understands' then this, maintains de Maré, is true architectural photography. It is not a record of the cracks but a print of the vision we need.

The title of the book is typical of him; it is laconic but, when the text has been studied, its peculiar appropriateness is revealed. He is an original thinker and under the section 'Ends' he explores, with telling extracts, what others have thought and adds with acuteness his own conclusions. He reveals the possibilities of photography as a medium of expression, setting against them its limitations, and in a brilliant chapter stakes its claim as an art. Thence he goes on, 'Until you have done your own processing you will not have tasted the full flavour of photography' and, under 'Means,' there follows in a comparatively short clear-cut section a description of equipment and technique backed up with practical data of the most useful kind. Tiresome jargon and bogus expertise are avoided, but everything essential, including much that it quite difficult to come by, is there. At the end of this section is a homily which, taken to heart, would remove the boredom from the normal photographic exhibition 'technique is the means, not the end; expression is the end.'

These two sections are followed by 130 photographs selected from sources all over the world to illustrate a series of points arising from the text. They constitute the most beautiful and informative series I have seen. His own photographs stand out clearly among the masters as examples of irreproachable technique and great artistic merit. Like others of his calibre he not only knows what he sees, but also knows what his camera sees. The book is a close integration of theory and practice and, at the same time, an unmatched exemplar. It is a joy to look at and to *read*. In its pages the means become deceptively simple; the end exciting.

Bryan Westwood

DANISH PUZZLE

ARKITEKTEN KAY FISKER. *By Hans Langkilde. Arkitektens Forlag.* 48*Crs.*

Those who look at architecture of the last fifty years detachedly will always tend to focus their interest on what is progressive rather than what is good. This is the reason why the achievements of architects not out of sympathy with tradition and of architects believing in certain classical principles, are being undervalued. The critic in England might be forgiven for this lack of judgment; for our Neo-Georgians have in fact been weaker and less exacting than our Moderns. But that has not been so everywhere, and the principal exception is Scandinavia and Denmark. How elegantly Östberg and Tengbom handled their traditional materials, how easily Asplund could move from his style of the twenties to his style of the 1930 Exhibition, and finally to the style of the Crematorium.

But the most engaging and also in some ways the most puzzling case, is Kay Fisker's, and so a book on him is a welcome opportunity to think of his buildings again. The book, by Hans Langkilde, is in Danish and has less than twenty pages of English summary. It is illustrated largely by drawings, sketches, plans and elevations, and that in itself is characteristic. Fisker's drawings are done with a loving care, a delight in the intimate detail and the gentle tones of water-colour which does not even cease when he presents blocks of flats of quite formidable size.

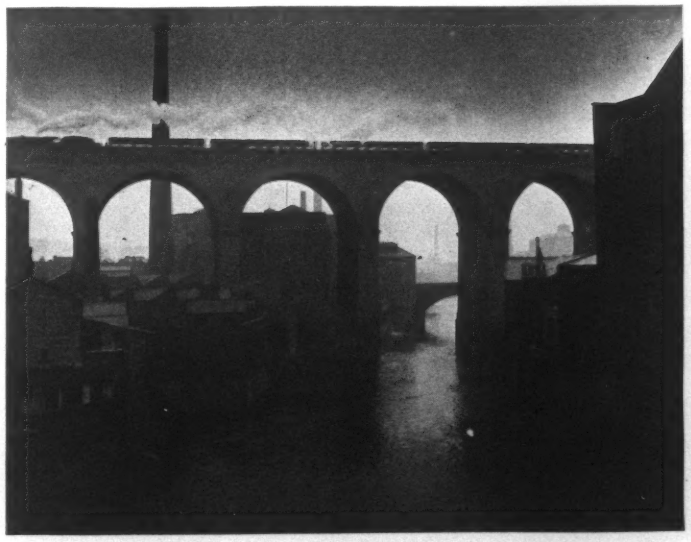
These housing jobs of the early 'twenties are perhaps Fisker's best-known contribution. He had started with houses in the country, cottages and country railway-stations influenced by Baillie Scott and, though Mr. Langkilde does not say so, probably by Tessenow too. Then in 1919 he seems to have turned resolutely Georgian. The turn is called one towards classicism, but is really what we would call Georgian without any hesitation. Kay Fisker indeed knew and admired Bloomsbury. It must be remembered that his fellow-countryman, Steen Eiler Rasmussen, wrote his classic on London in 1937. The long terraces of Georgian London are what come immediately to mind when one looks at Kay Fisker's work of the 'twenties and at that done at the same moment by some other slightly earlier Danes. The most familiar example is Kampmann's police headquarters at Copenhagen of 1918-1924. The first of the big housing jobs on which Fisker was now to specialize for a while, was Povl Bauman's in the Struenseegade of 1919-1920. Fisker's own most impressive block of flats was the Hornbackhus of 1922, eighty-six bays long, five storeys high, with a hipped roof and completely without accents. Its sources are the Berlin housing done at at the beginning of the twentieth century, its parallel the Vienna of the 'twenties, but neither Berlin nor Vienna nor, of course, Holland, knew anything like the fascinating, if alarming, combination of dainty detail with the merciless whole. The Hornbackhus has a closed inner court, a doubtful element even if the size is as enormous as it is here. Kay Fisker was soon to move to opener planning, as indeed to opener solutions altogether.

The Danish Pavilion at the 1925 Exhibition at Paris was an almost windowless cruciform, strictly symmetrical group of cubes, much more in the Central European idiom of the 'twenties. In 1928 Kay Fisker's changed from the Georgian shape of windows to square and horizontal shapes, and his characteristic low-pitched gables begin to appear, and in 1930, the year of Asplund's change of heart, Fisker produced a block of flats (with C. F. Moller) essentially in the International Style, and an extremely good one at that, well-grouped and with the use of split levels. But that was an interlude. The low-pitched gables remained but the rigidity of the International Style was shed. The result is Kay Fisker's most memorable job, Aarhus University of 1931-1939 (with C. F. Moller and P. Stegmann), the free grouping of clear-cut brick buildings of various shapes on a hillside, done with perfect ease and never demonstrative in a single detail. The extent of the influence of Aarhus on planning in England has not yet been fully evaluated.

Brick is the local Danish material. There is no steel and there is indeed little industry. Also the total population of the country is under five million. So the industrialization of the building industry is not a pressing need. There are plenty of excellent craftsmen and artisans. Architects' offices are small and personal. These conditions go a long way to explain Kay Fisker, Finn Juhl, Preben Hansen and the others. Moreover, it explains how Kay Fisker can have managed to remain a teacher all the time while being a successful architect, and not only a teacher of design, but also of history. His summary of the history of functional architecture, (*Praefunktionalismen*, 1950) remains to this day of outstanding value.

N. Pevsner

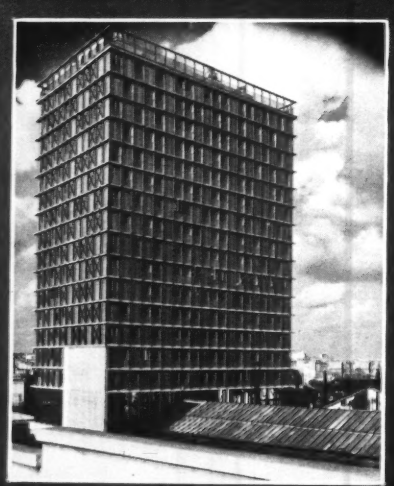
10, *Eric de Maré's justly-celebrated view of Stockport in the rain, from Photography and Architecture.*



BOOKS RECEIVED

TERMITES (THEIR RECOGNITION AND CONTROL). *By W. Victor Harris. Longmans, Green & Co. Ltd. (Tropical Agriculture Series).* 40*s.*

THE DESIGN OF RESEARCH LABORATORIES. *Nuffield Foundation Division for Architectural Studies. O.U.P.* 45*s*



33 Rue Croulebarbe, rising above the roofs of the Thirteenth Arrondissement, shows that Paris too has the problem of absorbing new towers into traditional skylines. In this case, however, its location means that no ancient monument is threatened, while its architecture (Edouard Albert, with Boileau and Labourdette) and pioneering exposed steel-tube frame, would be no disgrace anywhere. In addition, its placing at the rear of a deep site, well back from the road, represents a real break-away from the facade-on-street prejudices of Paris zoning laws. Such quality and ingenuity in design are the marks of the current reawakening of French housing architecture, and further examples are illustrated on pages 318-323.

Reyner Banham

URBANISM: USA

The literature of American urbanism has recently attained a certain age. This is not to say that it has matured—its maturity was as early as the time of Lewis Mumford's *Culture of Cities*. But with the appearance of a special issue of *Daedalus**, devoted to 'The Future Metropolis,' town planning finally entered the main arena of intellectual debate, along with such subjects as International Arms Control, the Russian Intelligentsia, the Mass Media, and other neuroses-of-state which have also been the subject of recent special issues of *Daedalus*. Town planning is thus a part of the White Man's Burden of US Liberalism, one of the many things that have been dumped on the desks of the whizz-kids of the Kennedy administration 'for immediate attention.'

But one may doubt that it is really a live issue in the sense that colour prejudice is a live issue. One of the reasons for saying that US planning literature was mature at the time of the *Culture of Cities* is that it has produced very few new ideas since. Mumford was preoccupied with the pathology of Metropolis, so are the contributors to *Daedalus* a generation later. They remain obsessed with the geriatrics of urban senescence, and their doubtful reward is to have fathered the rough-hewn branch of surgery known (hopefully) as urban renewal, by which whole organs of metropolis are lopped off and made over new.

But what is an American Metropolis? What Mumford had in mind was a city with a distinct corporate history and personality, expressed in economic and political power, and monumentalized in some massive units of capital investment—palaces, bourses, railway termini, law courts, cathedrals and the like. But when Starch Consumer Magazine Report assures prospective advertisers in *Playboy* that 72.4 per cent of its readers 'live in 168 metropolitan areas' of the USA it clearly does not mean what Mumford meant by *metropolis*, and neither do the contributors to *Daedalus*.

The North American continent abounds in striking proofs that a pile of king-size statistics do not add up to a metropolis, and while making all due regard to local pride,

* Winter 1961, also available in hard covers, published by Praeger, New York, $5.

and local munificence, it is difficult to see what specifically metropolitan functions are performed by most of the large towns of the US. The 168 canonized by Daniel Starch may have as many head of population, as large a rate-roll, as many square feet of gallery space and as many chamber music concerts as the traditional metropolises of the Old World, and they may be distributed across the face of the continent at about the same rate of incidence as Amsterdam, Cologne, Munich, Vienna, Budapest, Warsaw, Berlin. But each of these was (and sometimes still is) the heart and life of a distinct political, cultural and ethnic unit. Is this true of any American City? Washington is the metropolis of only one aspect of the US, the bureaucracy; New York of the communications industry; even Los Angeles and San Francisco have not yet decided which of them is the metropolis of the West Coast: St. Louis, Chicago, New Orleans, appear to exhibit some of the traits of a metropolis. That leaves another 161, whose elevation to metropolitan status by Mr. Starch and *Daedalus* merely creates problems that need not exist.

To say this is not European snobbery, but—rather—to see if America cannot do better than Europe in this respect. Behind Mumford's anguished prognosis of the metropolitan disease (Megalopolitan tendencies and General Paralysis of the Insane) lies the proposition that a metropolis, while healthy, is worth having. It sets the tone of a culture, regulates its commercial metabolism, rallies its political talents, fixes its corporate image among the commonwealth of human societies. Where a city is more or less doing this—a very rare circumstance nowadays—there may be good sense in the heart-grafts of Urban Renewal, or, at least, in holding up its arms, like those of the aged Moses, so that its children may prevail.

But the rest are pretty certainly expendable: in terms of relative scale and ratio of resources to problem, the US is, in this field, about where Europe was in the Thirteenth Century, able not only to found new towns, but to abandon old ones. How about putting Pittsburgh somewhere else, as the English once did with Sarum? America has the space, the resources and, for a little while yet, the time. The problem of the American Metropolis lies, in most cases, in taking seriously cities that don't deserve it, and in trying to operate ill-designed conurbations that would be better scrapped. America could become the first major culture to shed its pseudo-metropolitan encumbrances without losing any significant part of its cultural life in the process.

The alternative to Metropolis exists already, and has long been recognized as the other great problem of US urbanism—the suburb. This is a form of urban organization to which the nation is clearly committed, as Alistair Cooke explained at length and with lingering distaste in his Discourse* to the RIBA. But the sane study of the problem is all-but-paralysed by a failure to recognize its successes, and by an equal failure to recognize that the European name, *suburb*, involves an assessment that is false.

False because, as Mr. Cooke also observed—though without appearing to notice the import of what he had said—the US suburb does not need to be a satellite of a metropolis. It is not a subordinate nor a sub-standard limb of a city, but an independent urban unit with a character of its own. It blights the fringes of great cities because it does not need those cities and has no organic relation with them; it is at its best, one of the major successes of the American Way of Life, where it is allowed to exist on its own, as it does in every county of the Middle West.

There, too, it reveals its history. For it is not a new invention; towns that have stood since before 1900, towns with populations going on for 20,000, are found to be laid out entirely at suburban densities. They are not overgrown villages and no earlier street-pattern underlies the regular grid-iron. They were created, by accident or (rarely) design, in the suburban image. Main Street may present a conventionally urban façade of plate glass and neon, and directly behind it there is indeed (as we have been indoctrinated to expect) a squalid wilderness of parking lots and gas stations. But two blocks back from Main—one block back in some cases—the standard pattern of trim grass verges, roadside shrubs, white boarded gables and parked Chevrolets in every car-port has begun, and you are in suburbia without ever having been convincingly in town.

What is more, the 'suburb' is better than the 'town.' Against all the probabilities that a European will have assessed (balancing heavily wire-scaped views of Levittown against the idyllic scenery of the Andy Hardy films of his youth) grid-plan low-density housing can be a convincing image of urbanity—a point that has been obscured by excessive concentration on the social and cultural horrors of the raw new suburbs in the *No Down Payment* belt. Older and well shaken-down suburbs have grown out of this hire-purchased Hell; they also have trees and a better basic plan, for the grid-iron is—at these densities—a far better plan than the serpentining roads and closes that descend (one supposes) from Radburn, and are *de rigueur* now, even with cut-price tract-developers. Europeans are justifiably suspicious of grid-iron plans, since their main experience of them is in by-law housing or its Continental equivalents, smothering both urbanity and the *genius loci* under an abstract, land-valuer's geometry.

But the prairie can be so flat and featureless that the only genius of the place is the regular rectangular

*RIBA Journal, May 1961.

pattern of land-holding, with the roads running north-south or east-west along its boundaries, a system of map-co-ordinates made real by the cross-roads—far more real than the odd knoll or tuft of trees that may occasionally break the dead level of the ploughed land or standing corn. Within this landscape, the grid-iron plan of Prairie-ville is an accentuation of the *genius loci*. More unexpectedly, it also accentuates the land-form, instead of smothering it. The streets of Prairie-ville, plunging up and down over changes of level that are sometimes as big as seven feet, draw attention to every accident of the terrain; the town creek, trailing a meander of unkempt greenery through the grid, becomes an obtrusive landscape feature. But in a 'sympathetic,' landscape-architect's design, the changes of level would be smudged by contour-chasing roads and the creek lost at the bottom of the back gardens.

Beyond this, the function of the straight streets of the grid is subtly ambiguous. By implying, as Ian Nairn pointed out, a means of escape from the town, they threaten its urbanity, but at the same time they introduce an element of largeness into a townscape otherwise composed of small-scale elements, and this duality is heightened by the absence of visible fences that makes the land-surface of every block within the grid a continuous lawn on which the little houses sit lightly, barely engaged with the ground and the landscape. If the roads are narrow enough not to interrupt this lawn too much, and the tree-cover heavy enough (as it often is) the townscape becomes an idealized and intensified prairiescape whose reality as an ecological fact, rather than real-estate fiction, is guaranteed by the squirrels on the lawn. They are real flesh and fur, not—as in equivalent English settlements—plaster.

For a people that emphatically believes that the 'Outdoors' is beneficial to Man, yet may only be a generation away from farming, the result is a kind of permissive, do-it-yourself Utopia whose outstanding virtue is to have freed its inhabitants from the curse of Adam. Throughout the history of American Utopianism, down to and including the most praised of recent Utopias, that of the Goodman Brothers in their book *Communitas*,* runs a vengeful determination that those who live in sight of greenery shall till the soil, even though they also work in factory or office. But those who enjoy the green prospects of Prairie-ville from the seat of a motor lawn-mower look on scenes that are 'Nature, still, but Nature methodiz'd' to quote Alexander Pope, and their 'agricultural' pursuits are, to quote Humphrey Repton, 'less the reality of penury than . . . industry with an affectation.'

* Vintage Paperback, 10s. (Mayflower Publishing Co.).

As in the landscape gardens of Pope and Repton, the scenery and the way of life are inextricably related. Restore the curse of Adam, cultivate the land between the houses because penury is real, as in the Negro quarter of Prairie-ville, and the broken land-surface with its concomitant fences reveals at once how high the densities really are, how small the scale. But on this wrong side of the tracks, other limiting factors of Prairie-ville become manifest, because the houses of second-class citizens do not receive the regular painting that a wooden structure needs, nor have they the sanitary accommodation their high occupancy requires, and the municipality that leaves them to soakaways and cess-pits also tends not to bother with the upkeep of their roads.

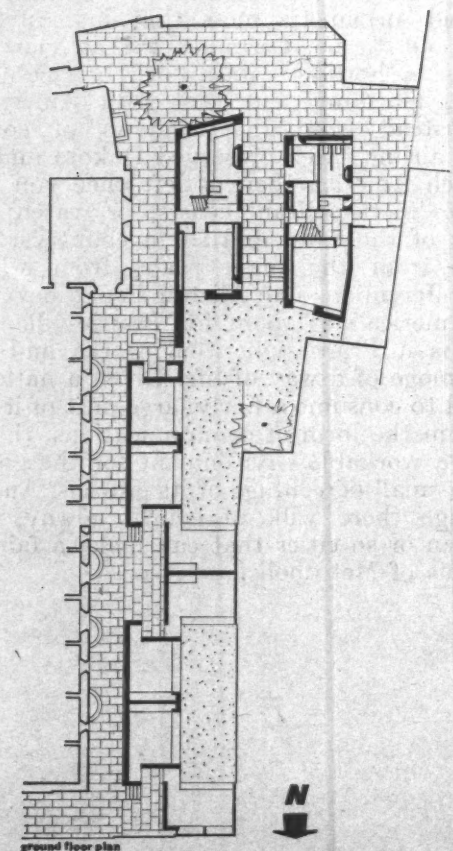
But what makes all this so sickening to see is that the margin between squalor on one side of the tracks and Arcadia on the other is so slight, a margin that most Prairie-villes could easily erase without municipal bankruptcy overtaking them. Most of the limits of Prairie-ville are as slight and precise as this. The grid-iron of twenty-foot developer's roads is almost perfect for ambling neighbourhood traffic, useless for anything heavier, hence the slummy chaos of Main Street. But the solution is not to screw up the grid into a tangle of twists and closes, in which the motorist is reduced to the status of a frantic rat in a laboratory maze-test. The solution is to get shopping and main highways out of the grid—a process already in hand with the move of shops from Main Street to free-standing shopping-centres, though the solution of the interconnection between grid and highway still seems a long way off.

Prairie-ville is not perfect, but neither is it the social and urbanistic mess that interested parties make it out to be. Certainly the air-view of Long Island as 'a housing estate entirely surrounded by water' is alarming, but that isn't America. Look down instead from the windows of some Mid-Western airline's well-preserved Dakota and see just how much America there is left once you get away from the 'metropolitan' coasts, or watch from the windows of the train and see a countryside that is invisible from the main roads from which professional Jeremiahs like Alistair Cooke never seem to stray. America has room for Prairie-ville, provided that it is a Prairie-ville that works and gives an honest image of a way of life. Given a nation that is prepared to consume a fairly large part of its national product in the form of communications, this form of town is a workable environment for the good life of all but a small percentage of its citizens. And for that percentage there will, of course, always be those half-dozen or so cities that can make a fair boast to the status of Metropolis.

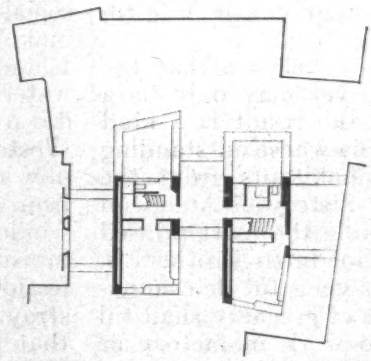
Undergraduate Rooms at Brasenose College, Oxford

ARCHITECTS: POWELL AND MOYA

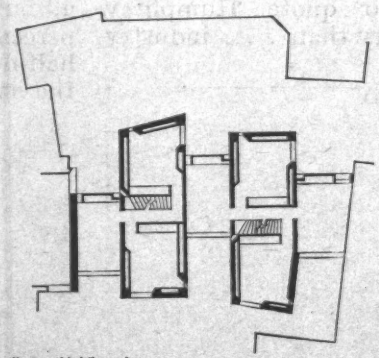
By far the most complex and sophisticated example of college infill to appear in the present wave of enlargements and extensions, Powell and Moya's new work for Brasenose College, Oxford, poses once more the problem of the right kind of architecture for such a task and such a setting. The problem has been admirably solved—as the next six pages show—but once more the solution has shown that there is no simple rule, no one right answer to the problem. The need to consult the genii of some very awkward places has driven the architects of college infills to develop ingenious variations on the standard themes of collegiate architecture, particularly in planning, and it is to be hoped that the lessons they have learned will also be studied by those who are called upon to design new colleges and new universities on less constricted sites—nothing could be more inimical to a developing University architecture than the premature crystallization of a diagrammatic formula for collegiate planning.



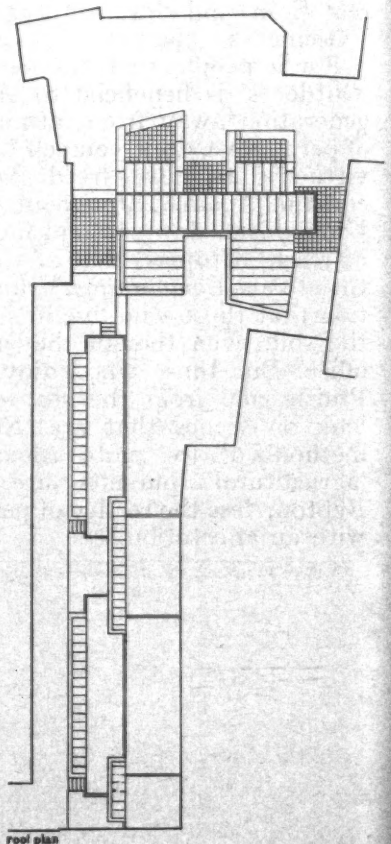
ground floor plan



fourth floor plan



first to third floor plan



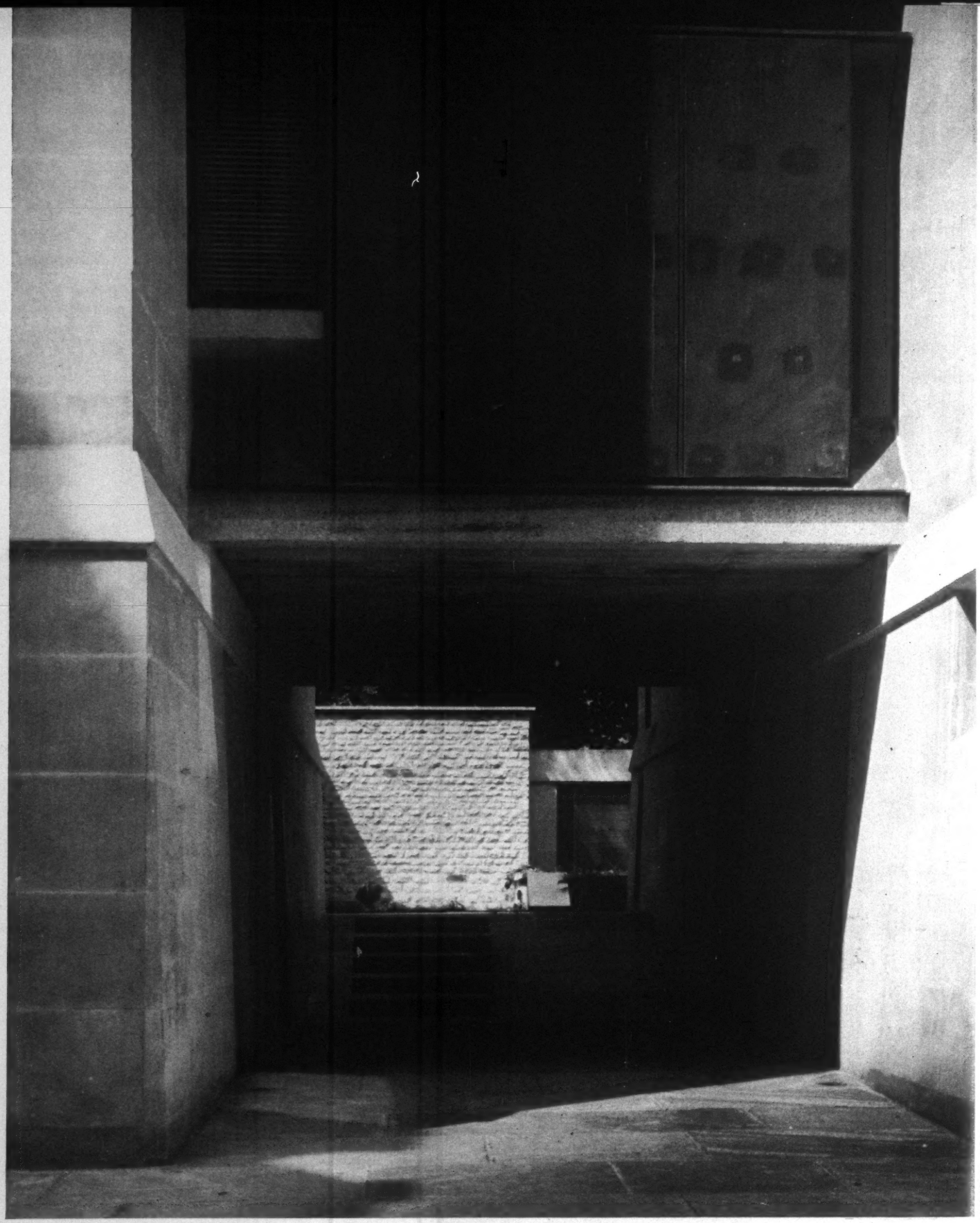
roof plan

OXFORD INFILL

1

1, the new building from the tower of All Saints' Church. 2, the four-storey block from the south-west.

2

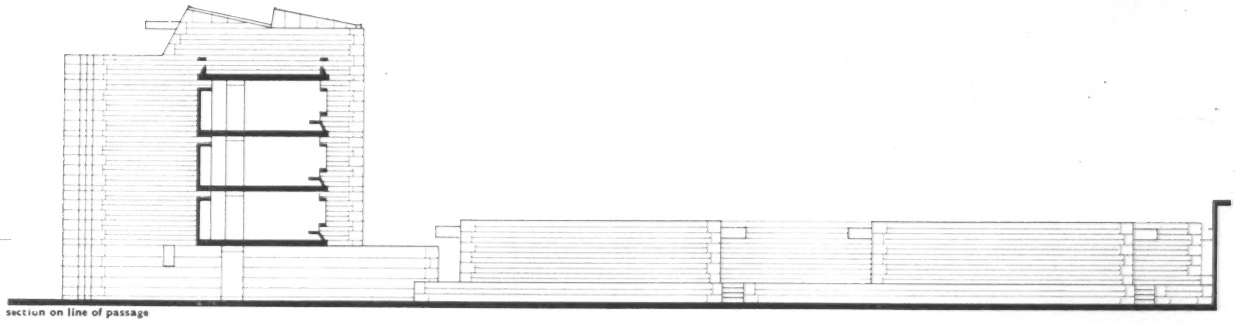


3

UNDERGRADUATE ROOMS, BRASENOSE COLLEGE, OXFORD

3, looking under the tall building into the first of the internal courtyards containing the single-storey blocks, seen in 4 on the facing page. 5, entrance to the single-storey buildings, with the four-storey block behind.

4



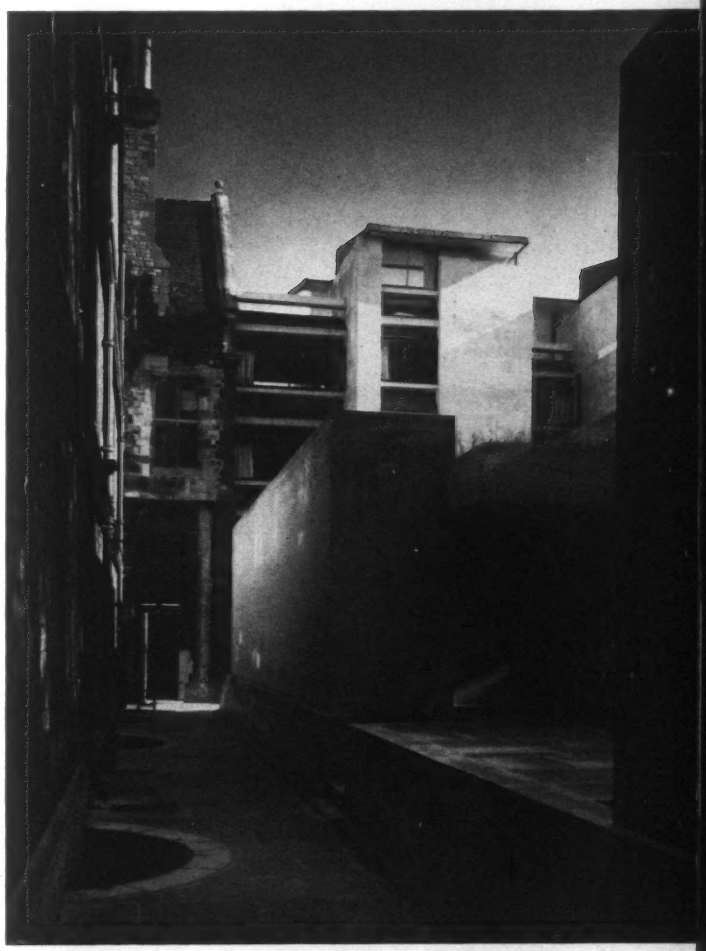
section on line of passage

The site was the ' backyard ' of the College on its western boundary adjacent to Lincoln College. It consists of a ' square ' about 60 ft. by 60 ft. and a ' passage ' about 110 ft. by 35 ft. The surrounding buildings are either 1900 Gothic, stone-faced, or stuccoed Georgian. They are about 35 ft. high. Rather than giving detailed schedules of requirements, the College asked the architects to provide as much accommodation as possible, in the form of bed-sitting rooms, on this very restricted site.

In the square has been placed a 4-storey building containing 23 rooms, with two additional rooms in a penthouse. Some of the best views are oblique, towards the nearby church spire. Other good views from the first floor up are to the north over one of the gardens of Lincoln College. These sometimes charming, but restricted and oblique, views and the irregular outline of the surrounding buildings influenced the shape of the new building, the rooms being individually designed to make the most of the views. Windows are arranged in more than one wall of a room so that, for example, one window can face north to the best view, whilst the other lets in the sunlight. This treatment of the rooms has produced a building of irregular and informal outline.

As the 4-storey building is placed in the most open part of the site, the ground floor has been designed to maintain as far as possible a feeling of space. This was done not by raising the block on columns but by building solidly down to the ground and giving tunnels and passages through the stonework. This gives an indoor scale to the area and so seems to increase the dimensions of the site.

In the ' passage ' tall buildings were not possible.

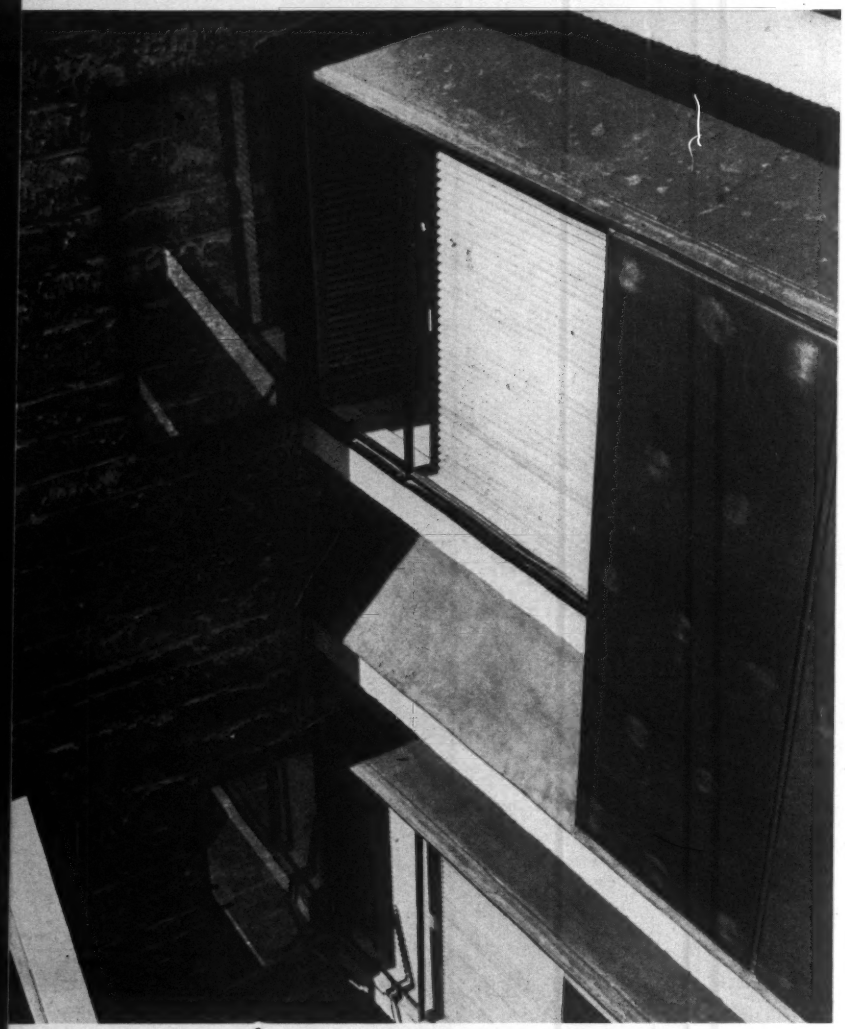


5

4

Instead there is a group of single-storey ' pavilions,' each containing one or two bed-sitting rooms. The rooms are approached from small entrance courts and are arranged to open on to small private courts or gardens. There are seven such rooms.

The load-bearing walls, of Portland stone, are expressed as such, not as an applied veneer or infilling. They clearly carry the weight of the building. The quoins are of smooth Whitbed and the infilling between them is of Roach, which has a slightly pitted surface. None of the stone has been ground smooth. In the higher building the main walls are carried on ground beams supported by reinforced concrete columns, resting on high-pressure reinforced concrete pads on mass concrete bases. They consist of 9 in. load-bearing brickwork faced with 2 in. Portland stone, but with solid load-bearing stone quoins bonded in with the brickwork. The inner non-structural skin is of clinker



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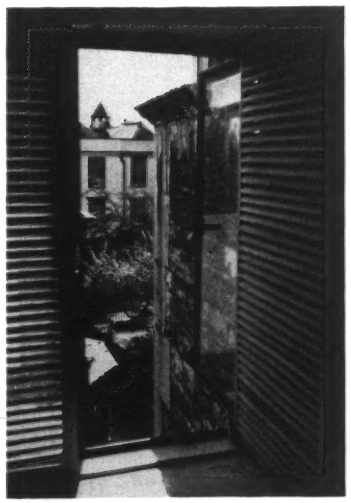
7

6, detail of the lead facing on the south wall of the tall building. 7, staircase landing in the tall building. 8, view of the High Street from the tall block.



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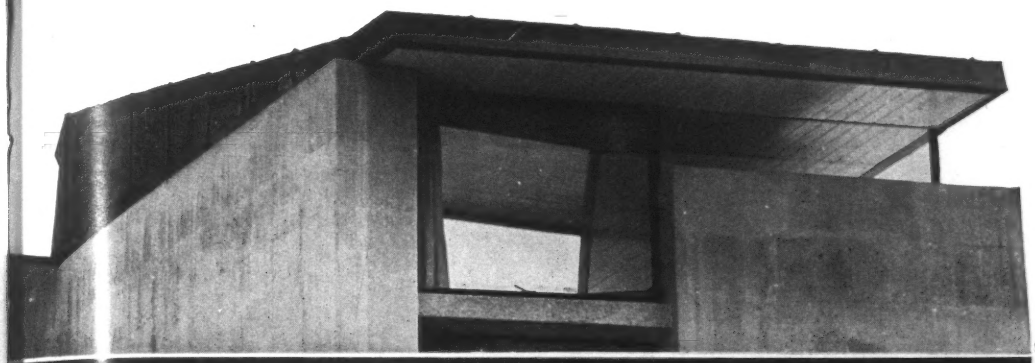
blocks, plastered. The floors in this building are of in-situ reinforced concrete, with glass silk insulating quilt on top, cement screeded and finished with hardwood block. Skirtings are flush with the slightly textured plaster wall finish and are of Portland stone. Ceilings are plastered. Exposed edges of floor slabs under windows are of bush-hammered concrete with Norwegian quartzite aggregate. The roofs are similar to the floors, but with 1 in. cork insulation with roofing felt, finished with paving slabs. The roof of the penthouse is of timber, lead covered ; the underside is of boarding, painted. The windows have precast concrete transomes and cills with similar finish to the exposed edges of the in-situ concrete floor slabs, but with polished surfaces inside the rooms and with the sloping external faces sheathed in lead. Window frames are of black polished anodized aluminium. Staircases have English elm flights, Portland stone bottom step and York stone paving on landings.

The construction of the low buildings is generally similar to that of the higher building, except that the foundations consist of a reinforced concrete raft on top of existing walls which rest on piers and vaults. The external load-bearing walls are of cavity construction, with stone-facing and quoins as for the higher building. The roofs, which can be seen from the surrounding buildings, are covered in part with cobbles ; in part with earth and grass. The raised clerestoreys are lead covered The rooms are centrally heated from an existing boiler house, and have low radiators below the window seats. They also have built-in infra red panel electric fires.



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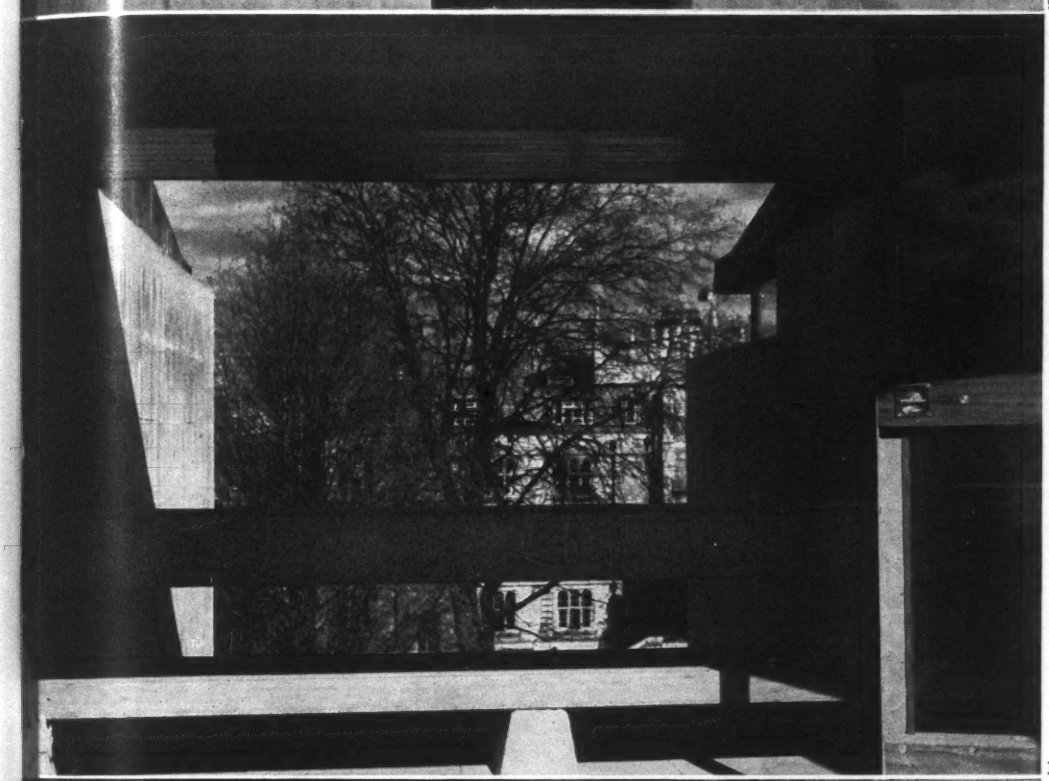

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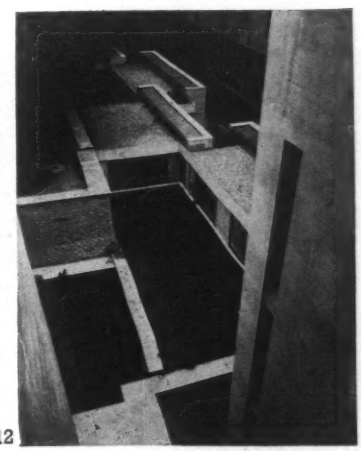

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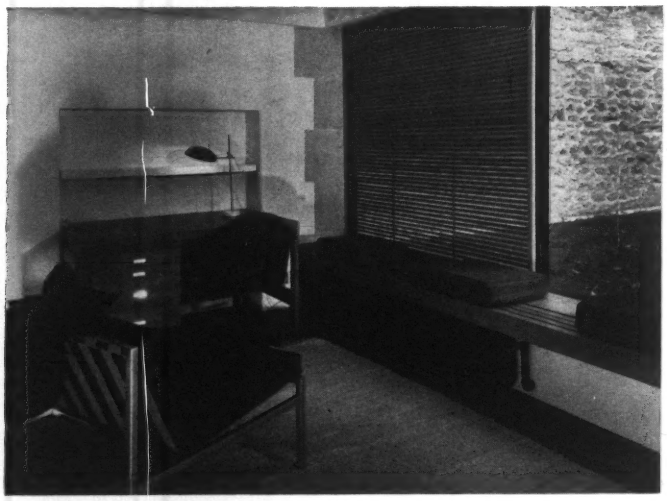
9, one of the penthouse rooms on the tall block. 10, looking north from the penthouse. 11, looking down from the tall block to the steps into the internal courtyard. 12, the single-storey sets from the roof of the tall building. 13, looking back from the courtyard to the tall building.

11

13



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14, interior of one of the single-storey sets, showing the afrormosia sliding screen. 15, looking into the courtyard from the single-storey block.

15

UNDERGRADUATE ROOMS, BRASENOSE COLLEGE, OXFORD

EXETER ROOD SCREEN

HENNING BOCK

1

No problem connected with Gothic architecture in England has been studied as consistently in the last ten years as that of the origins of the Perpendicular style and with it the origin of the fourteenth century style of Gloucester Cathedral. Dr. Bock in a forthcoming volume of the Heidelberger Kunstgeschichtliche Abhandlungen *deals with the Decorated Style in England in all its aspects. In this article he singles out one key monument and proves its crucial importance for the historical position of the transept and choir of Gloucester.*

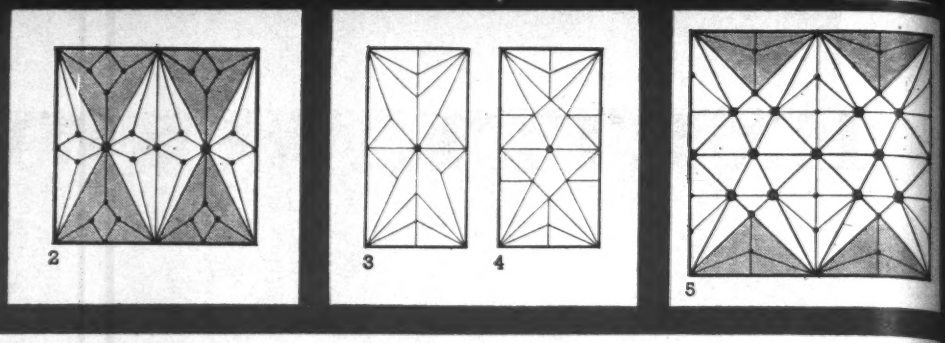
In discussions of the origin and development of the Perpendicular Style[1] the decoration of the choir at Gloucester has so far been the centre-piece. The aim was to find out, whether the Perpendicular derives from the Court Style in London, that is the Chapel of St. Stephen's or from the Chapter House of Old St. Paul's or from the cathedral of Bristol. In these discussions, however, the vaults of the south transept and of the choir of Gloucester have not been paid enough attention to. All that has been pointed out unanimously is a rather vague resemblance with the vaults at Tewkesbury and Wells. A closer examination of these vaults will corroborate the assumption, expressed by Professor Pevsner,[2] of the dependence of Gloucester on the West and South-west. The truth is that the new buildings at Gloucester, Bristol, Tewkesbury, Wells and also Exeter belong to one regional style, but that only at Gloucester in addition elements of the Court Style and of contemporary French architecture have been added. It is this brilliant synthesis, which gives Gloucester its unique importance.

The development of the Decorated Style in west and south-west England was concentrated in a few centres. As early as the last quarter of the thirteenth century elements of the new style can be traced in the rebuilding of Exeter Cathedral; especially in the decoration, such as the foliage on corbels, keystones and capitals. Here the change from naturalism to a highly stylized and decorative manner can be followed.[3] The complicated and intricate forms of the vaults and recesses for abbots' monuments in the choir of Bristol Cathedral (begun 1298) and also the hexagonal north porch of St. Mary Redcliffe reveal the artistic possibilities of the Decorated Style. Finally, in the rebuilding of the eastern part of Wells, the development of the style can be traced step by step to the turning point, when a rigidly perpendicular tendency replaced the flowing vagaries of the Decorated. That far the story is familiar. But there is another building or rather part of a building which comes into it and which has not yet been sufficiently appreciated.

[1] For the latest contributions cf. Pevsner, Bristol, Gloucester and Troyes, ARCHITECTURAL REVIEW, 1953, p. 89 ff.; Harvey, *English Mediaeval Architects*, London, 1954, Hastings, *St. Stephen's Chapel*, Cambridge, 1955, Webb, *Architecture in Britain: the Middle Ages*, Pelican History of Art, London, 1956, p. 138 ff. This article is part of a forthcoming volume on the Decorated Style in the 'Heidelberger Kunstgeschichtliche Abhandlungen,' where a more detailed discussion of other aspects of the Decorated Style will be undertaken.

[2] ARCHITECTURAL REVIEW, *loc. cit.*

[3] Cave, *Mediaeval Carvings in Exeter Cathedral*, King Penguin Books, 1953.



2, vaults of the chancel, Bristol Cathedral. 3, western vault of the rood screen and, 4, vault of the passage in the rood screen at Exeter Cathedral. 5, vault of the nave at Tewkesbury Abbey.

The furnishings and fitments of the new choir of Exeter were installed between 1300 and 1326. They ought to be compared, not only with the tomb of Edward II at Gloucester (which goes without saying), but also with the architecture of Gloucester. The important fact is that the Exeter rood screen has the earliest vault of the type which later was used at Gloucester and Tewkesbury, the type which may be called a net-vault.

The Exeter rood screen is not in its original state. Restorations and alterations have changed it but the surviving fabric rolls and a view by Britton (1826) (1)[4] allow a fairly accurate reconstruction. In the fabric rolls the first payments for the rood screen occur in 1317-18.[5] Stone was bought from William Canon of Corfe during the following years. In 1323-24 '45 images in 11 panels with a Doom and one image for the corner' are mentioned, and in 1324-25 '12 images in the 2 end panels and 10 small images near la pulpytte.' These figures had been carved by a London 'imaginator.' In the same year the great rood is mentioned, and this was painted in 1326 and put into its place above the rood screen. On the west side of the rood screen under the three arches, there were altars on either side of the central doorway, the one on the north dedicated to St. Nicholas, the one on the south to the Virgin. In addition there the two patron saints of the cathedral were represented, 'an image of St. Peter . . . at the choir entrance on the north side' and 'an image of the Blessed Virgin Mary at the choir entrance on the south side between the altars of St. Nicholas and St. John Baptist.' Above the rood-screen, an organ was fixed. In the seventeenth century (probably in 1648) the carved reliefs were replaced by paintings, and in 1819 an old wooden cresting was exchanged for a stone one. Britton's plate shows the screen in this state. In 1869 a lively controversy arose on account of a new restoration carried out by Gilbert Scott. The issue was, whether the screen should be kept or whether it was unsuitable for nineteenth century liturgical needs. Scott stood against removal, but had finally to give in to a compromise and take out the back wall so as to make the screen transparent and allow the congregation in the nave to see the choir.[6]

The original screen is of a usual type, the type which exists still at St. David's, at Southwell and elsewhere. The blind tracery on the former back wall helps to recognize sources. It consisted of a series of long shafts, and between them a frieze of pointed arches standing upside down on normal arches, thus forming ogee intersections. This motif corresponds to that of the canopies of the sedilia in the Bristol Lady Chapel of some years before, 6. They are, it is true, a remodelling of the nineteenth century, but are said to be based on reliable evidence. The same motif was used again in the great strainer arches in the crossing of Wells (about 1338), 7. So, although a London 'imaginator' did the reliefs at Exeter, the designer of the screen must have known the new building of Bristol.

Now for the vaults of the Exeter screen. They do not take up the pattern of the choir vault at Exeter, which in addition to ridge ribs and diagonal ribs, has four pairs of tiercerons, and rises palm-like from the springers, 3. It seems that instead once more the new chancel of Bristol gave the model, and it does not matter in this context whether the Bristol vaults were already finished by 1317 or only planned. They introduce into the rib vault liernes in the shape of a scissor-like splitting of the diagonal and ridge ribs, and create thereby, in the middle, at the keystone, a cross-like pattern. The little western vaults of the Exeter screen are designed on the same principle, but the ridge ribs are kept intact and only the diagonal ribs split.

The little vault over the passage is laid out on quite different lines, 4. An analysis of its rib-pattern reveals the fact that this single bay comprises the patterns of two bays, the one, as it were, overlaid on the other. Diagonals and ridge ribs give the basic design, but over it small crosses are placed on either side of the ridge rib. Furthermore, there are three central longitudinal ribs of which the two outer ones are not continuous. If one imagines this one-bay-pattern prolonged by yet another bay, these two little crosses turn out to be parts of diagonal ribs, which run across two bays instead of only one. This is a very important feature, since the two-bay-diagonals would, if further continued, result in a net vault. Such a rib net was actually executed in the choir of Wells (ca. 1325-40) and a little later at Ottery St. Mary (ca. 1337-50), the latter church had been added, in 1335, to the diocese of Exeter. In spite of this, its architectural style depended mainly on the remodelled choir of Wells. Both vaults have taken over the still somewhat primitive form of the two-bay diagonals of the little Exeter vault. The diagonals start not only from the springers, but also from the tops of the penetrations. The number of diagonals is doubled, and so a very close net is achieved. Two-bay diagonals can be called the *leitmotif* of the vaults of the west and the south-west. They do not split up the vault surface into a number of independent little compartments, but stretch along a continuous plane. The effect, though in two dimensions instead of three, can be compared to that of the wide-spreading space of the Bristol hall-choir.

At the same time, that is, some time in the first half of the fourteenth century, a similar pattern was used in the vaults of Tewkesbury Abbey. Accurate dates are not known. Aecording to the heraldry of the bosses[7] and other evidence, the nave was begun after 1321, the choir remodelled about 1330-40, and the crossing as late as 1350. The vault of the nave is specially important, since it is the first pointed tunnel vault on a grand scale with a continuous rib net, not only in England but anywhere. The date comes for instance well before Peter Parler's work at Prague which only begins after 1350.

This historical position of the Tewkesbury nave vault, 5, makes it even more important to emphasize that it consists of transverse ribs and one-bay diagonals, accentuating the division into bays, and in addition two-bay-diagonals contradicting this division. It is the two-bay-diagonals which convert the vault into a rib net. As in the screen at Exeter, the ridge rib is accompanied by two longitudinal ribs, which run through the points where the one- and the two-bay-diagonals cross. Primary and secondary ribs are not only distinguished in size of profiles but also by different kinds of bosses. What at Exeter had been tried cautiously on a small scale, was demonstrated at Tewkesbury on the grand scale. Tewkesbury cannot be imagined without Exeter.

The vault of the choir at Tewkesbury,

[4] Britton, *Cathedral Antiquities: Exeter*, 1826, pl. IX.

[5] The following data are taken from Bishop and Prideaux, *The Buildings of Exeter Cathedral*, 1922, p. 62 ff. and Vallance, *Greater English Church Screens*, 1947, p. 65 ff.

[6] Scott's notes explicitly say that the vault of the passage remained in its original form. Britton's view is incorrect in that it shows twelve instead of eleven panels.

[7] Blunt, *Tewkesbury Abbey*, 1898, p. 115 ff., Cave, 'Roof Bosses in the Nave of Tewkesbury Abbey,' *Archaeologia*, 1929, p. 71 ff.

[*continued on page* 317

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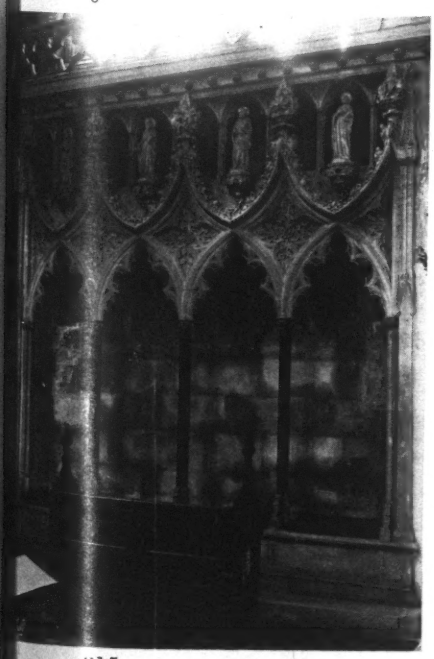

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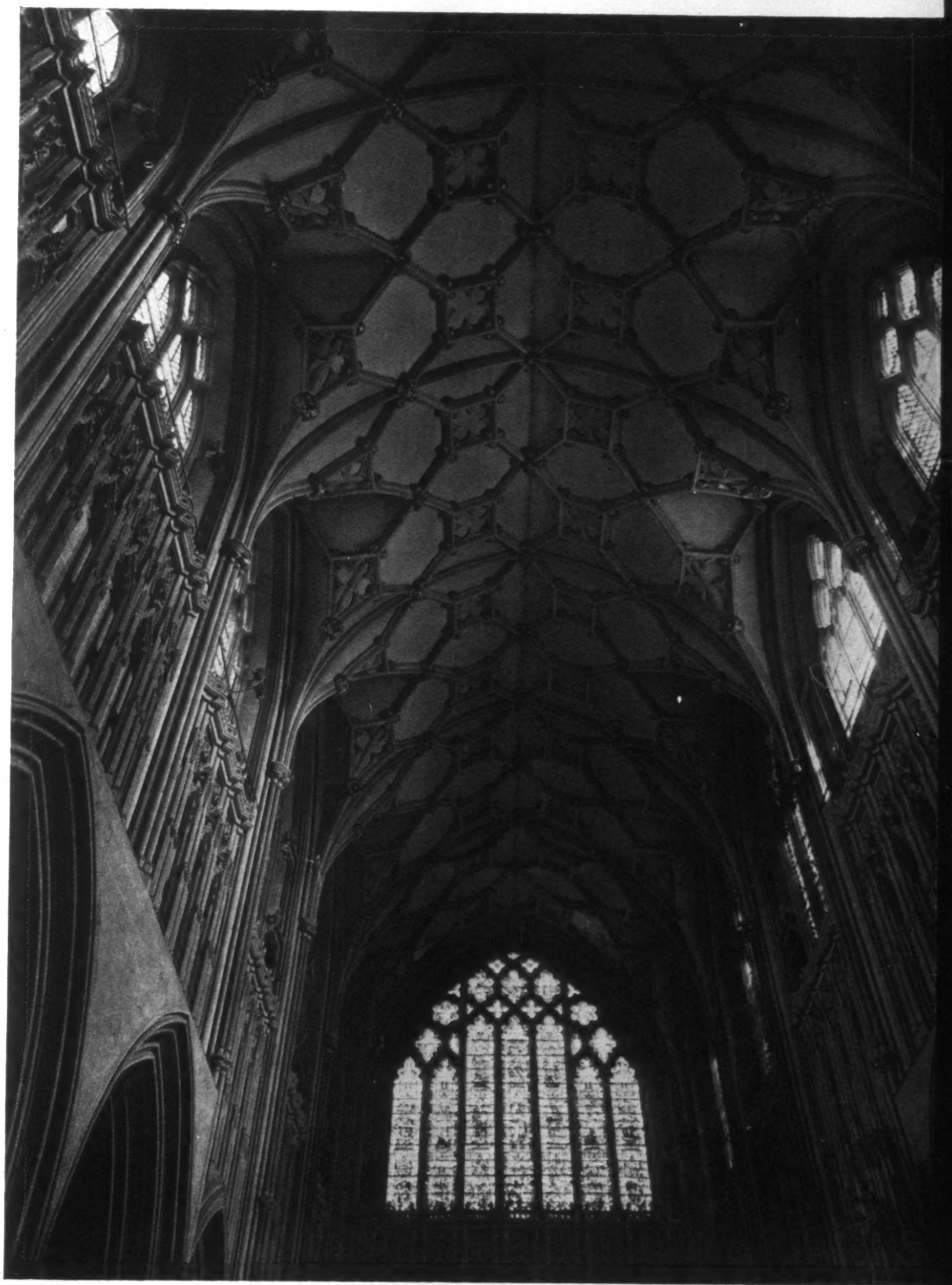

6, the sedilia in the Lady Chapel of Bristol Cathedral. 7, strainer arches in the Crossing at Wells Cathedral.

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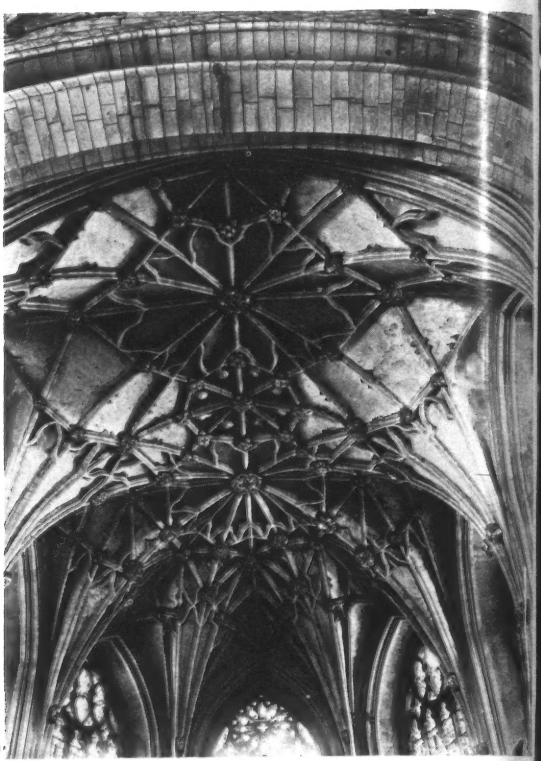

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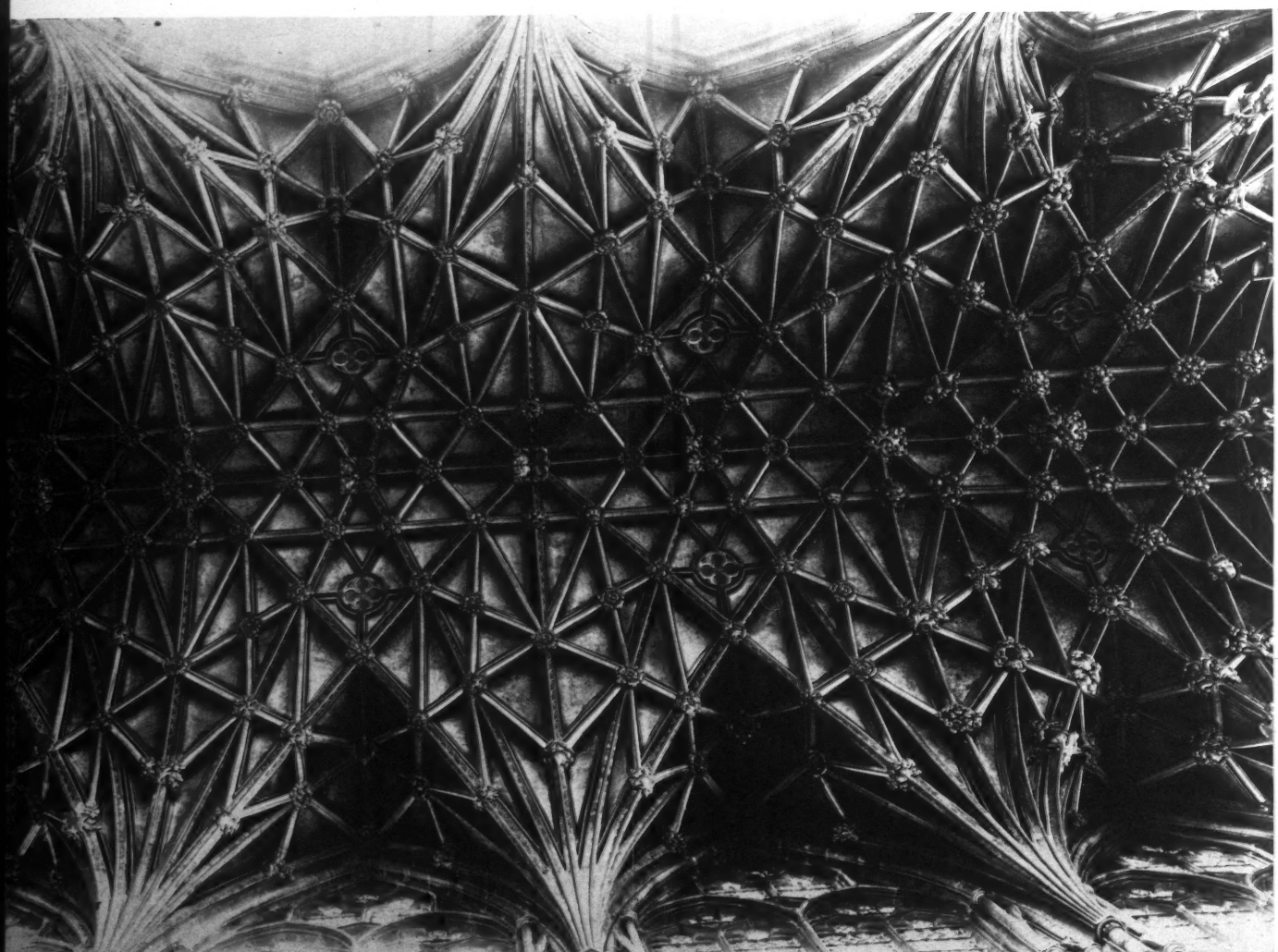
Choir vaults at Ottery St. Mary (8), *Tewkesbury Abbey* (9), *and Gloucester Cathedral* (10).



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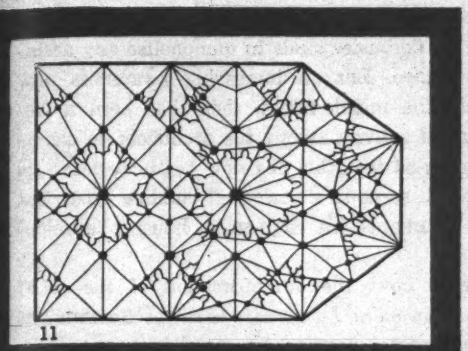

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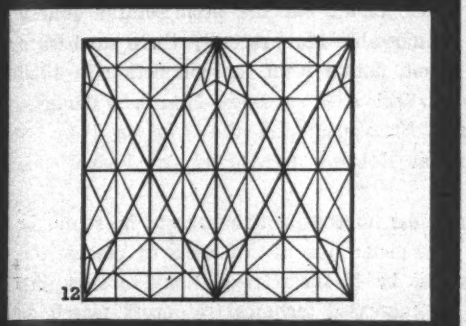

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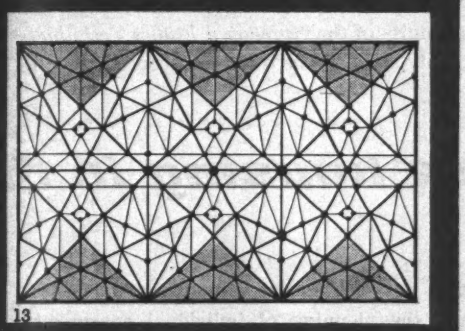

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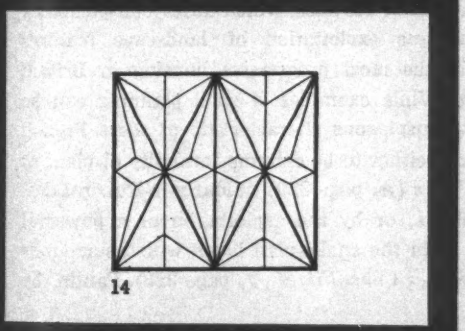

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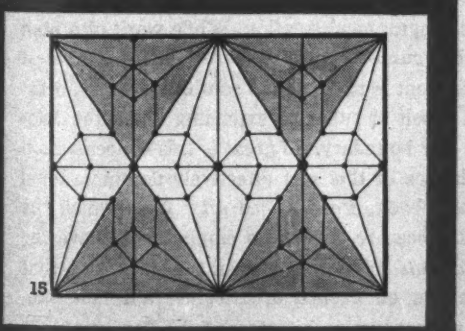


15

11, *choir vault at Tewkesbury Abbey.* 12, *vault of the south transept and,* 13, *choir vault at Gloucester Cathedral.* 14, *vault of crypt at St. Stephen's, London.* 15, *vault of the nave at Canterbury Cathedral.*

9, 11, is designed on the same principles, although at first sight nave and choir vaults seem to have nothing in common. There is no pointed tunnel vault in the choir, nor a comparable clarity of design. There are, however, apart from the normal one-bay diagonals, transverse arches and ridge ribs, a net of two-bay-diagonals, ruthlessly drawn, and rising not only from the springers but also from the ends of the transverse ridge ribs. In strict consistence they are continued all round the apse and into the first choir bay. The irregular surface of the vault blends both systems to such a degree that they are difficult to disentangle. The designer ingeniously made use of the Norman polygonal apse, and achieved a maximum of intricacy, which is of course what all the best designers of the Decorated Style in the west and south-west of England wanted to achieve.

We can now turn to Gloucester; for clearly the same ingenuity has been applied to the remodelling of the south transept and the choir vault. The remodelling took place a little later than the rebuilding at Tewkesbury, in the south transept between 1331 and 1337, in the choir between 1337 and c. 1350. The three-bay vault of the south transept, 12, combines a net with one-bay diagonals, but in a way different from Tewkesbury. There are no two-bay diagonals, but in the middle a close-knit net with a ridge rib creates almost the appearance of a tunnel vault. The springers are rounded, and foreshadow in this respect fan vaults, although the first real fan vault, that of the cloisters of Gloucester, was built only in the 1360's. The choir vault is far harder on the eye. The old Norman chevet had been eliminated, whereas Tewkesbury had kept it. A new square end was substituted on the English tradition of Lincoln, Ely or Beverley. In this respect, during the fourteenth century, French and English traditions stood irreconcilably against each other, and it is significant that St. Stephen's, the Chapel Royal, in London, while built on French models (Sainte Chapelle in Paris), changed the French polygonal east end into a square one.

At Gloucester the square east end made it easy to provide a pointed tunnel vault, 10, 13. Exactly as at Tewkesbury, the basic design consists of one- and two-bay diagonals with three longitudinal ribs. A new feature is a rib leading from the springer of one bay to the point where the one- and two-bay diagonals of the adjoining bay cross one another. It takes some ingenuity to make it out in the vault but is quite clear in a drawing. These are the main ribs accentuated by heavy profiles in contrast to the thin lierne ribs. Most of these serve as connections between the crossing points of the main ribs. Their great number is confusing but the basic design has a perfectly logical order. This indeed, is a characteristic feature of the Decorated Style: to disguise an underlying order by abundant decoration.

All the vaults so far mentioned are designed on the same principle of one- and two-bay diagonals. In some cases the pattern is applied to traditional cross vaults, in others to pointed tunnel vaults. The vaults in question succeeded one another very rapidly: 1317 the rood screen at Exeter, after 1321 the nave at Tewkesbury, between 1330 and 1340 the choir; about 1331-37 the south transept at Gloucester, after 1337 the choir. At Exeter the principle seems to have been conceived in close connection with Bristol, in the nave vault of Tewkesbury it was transferred to a great vault, and in the choir vaults of Tewkesbury and Gloucester it was—according to the now fully developed Decorated Style—complicated beyond any easily recognizable order. The vaults show the consistent development of one idea, and so one may perhaps even assume that they were all designed by a single master. Documentary evidence is lacking, but the single-mindedness of conception of the group carries conviction.

This West English development does not seem to have been very much influenced by other regional styles. Nowhere else this faith in the one- and two-bay diagonal system with a tunnel vault can be found. Only the nave of York Minster received in about 1345-70 (that is, somewhat later), a wooden vault with a fairly comparable rib-net, but the net is developed from the duplication of one-bay diagonals and in this remarkably similar to the slightly later vaults in the chancel of Prague Cathedral.[8] The evidence we have of vaults done by architects of the court at London is rather slight, but reveals a very great difference. The undercroft of St. Stephen's (begun 1292), 14, proves that the aim was not a continuous rib-net but a combination of a strict bay division with star-like configurations. This aim found its perfect achievement in the vaults of the nave of Canterbury (begun ca. 1370, the vaults ca. 1400), 15.

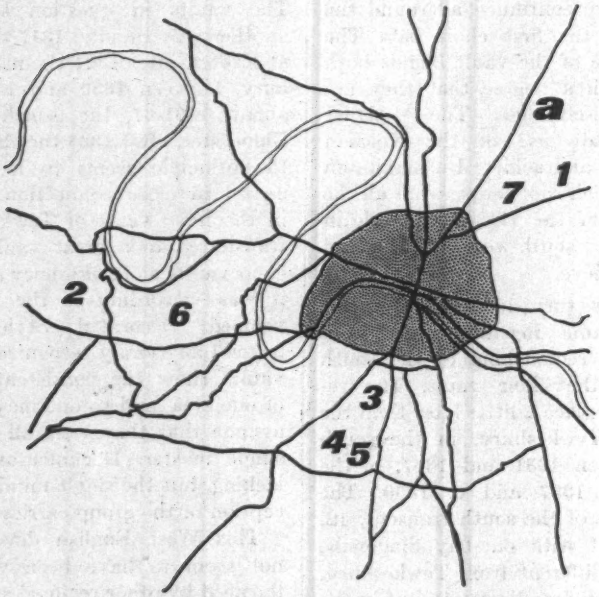
Professor Pevsner in *The Architectural Review* in 1953 pointed out connections of Bristol with Gloucester. He drew attention to the fact that at Gloucester, side by side with motifs drawn from the court style at London, and from St. Urbain at Troyes, other forms occur. The analysis of vaults now attempted confirms in addition the assumption that Gloucester must have been designed by a master who came from the tradition of Southwest English architecture and not from anywhere else.

[8] cf. Clasen, *Deutsche Gewölbe der Spätgotik*, 1958, p. 56 ff. and the review by Pevsner, in *Art Bulletin*, 1959, p. 333 ff.

Justifiably, since there is no one else like him, and may never be again, Le Corbusier tends to monopolize any architect's view of France. But an increasing awareness now exists that, since the middle fifties, there has been a tremendous ferment of activity among the architects he has so far overshadowed, and that this has now begun to leave its mark on the French scene in a variety of building types, but one of which is dominant—the large-scale housing development.

For some years now, the administration of the HLM programme (*Habitations à Loyers Modérés*) of Government loans for medium-rental housing has tended to encourage large units of development, but the architectural quality was not, at first, remarkable. More recently, there has been a striking improvement, dating from the completion in 1956 of the *Cité Emmäus* (below, ***a***) at Blanc-Mesnil, by Candilis, Woods, Josic and Brunache, and the *Cité de l'Abreuvoir* development at Bobigny by Aillaud and Vedrès (see ***1***, page 319).

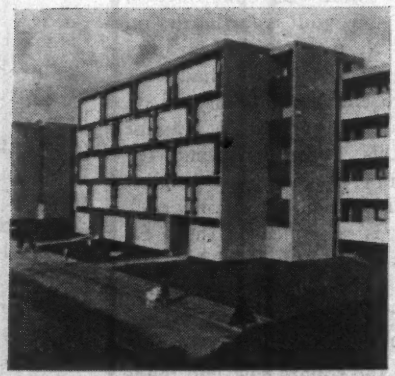
The reasons for this improvement appear to be found in the ability of a new generation of architects to resolve the stringencies imposed by financial regulations through the exploitation of the increased technical resources placed at their disposal by enterprising contractors, and the mechanical and structural ingenuity of the *Bureaux d'Etudes Techniques* (cf. AR *World*, July 1961). The resultant combination of



Paris and its suburbs: a, Blanc-Mesnil (see below). 1, Cité de l'Abreuvoir, Bobigny. 2, les Grandes Terres, Marly. 3, les Buffets, Fontenay. 4, 5, les Blagis, les Bas Coudrais, Sceaux. 6, Domaine de Beauregard, St. Cloud. 7, les Courtillieres, Pantin.

new housing in the

talent reveals itself not only in the structure and cladding of the blocks and the planning of individual apartments, but also in the layout of the sites, which differ conspicuously from the picturesque exploitation of landscape features that distinguishes the most progressive housing in Britain and Scandinavia. While examples of such planning can be found, the most conspicuous characteristic of these French developments tends either to be extreme formality of plan, as in *les Grandes Terres* (***2***, page 320) at Marly-le-Roi, by Lods, Honneger and Beufé, or by the exploitation of a powerful formal concept, as in the snake-plan block which surrounds most of the site at *Les Courtillières* (***7***, page 323), Pantin, by Emile Aillaud.



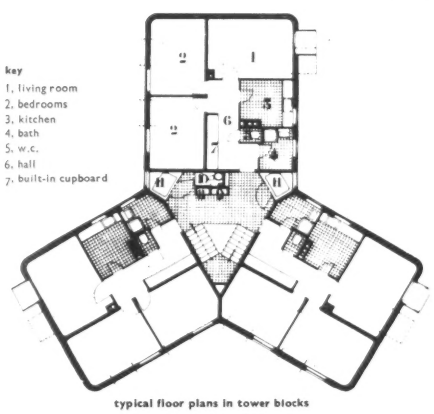
***a**, Blanc-Mesnil, the pioneer suburban development by the Candilis-Woods team—as far as Paris is concerned, the beginning of better housing architecture; as far as the architects are concerned, the beginning of a train of development leading to their new town at Bagnols-sur-Cèze.*

The other outstanding characteristic of these developments tends to be their geographical location. While work of a high order can now be found in most *Departements*, the greatest concentration of talent is to be found south, west and north-east of Paris in a belt of suburbia extending about ten kilometres from the city boundary. So great is this concentration that housing schemes of this sort effectively dominate Ionel Schein's new guide-book, *Paris Construit*,* from which the adjoining map has been re-drawn. So emphatically have the architects of *logements de banlieu* broken the stagnation that seemed to be settling on French architecture a decade ago, that the bulk of the modern architecture of the Paris area can now be laid to their credit.

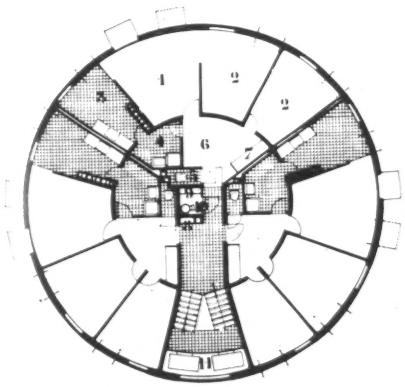
*Vincent, Fréal, price (in England) 12s. 6d.

Paris Suburbs

1



typical floor plans in tower blocks



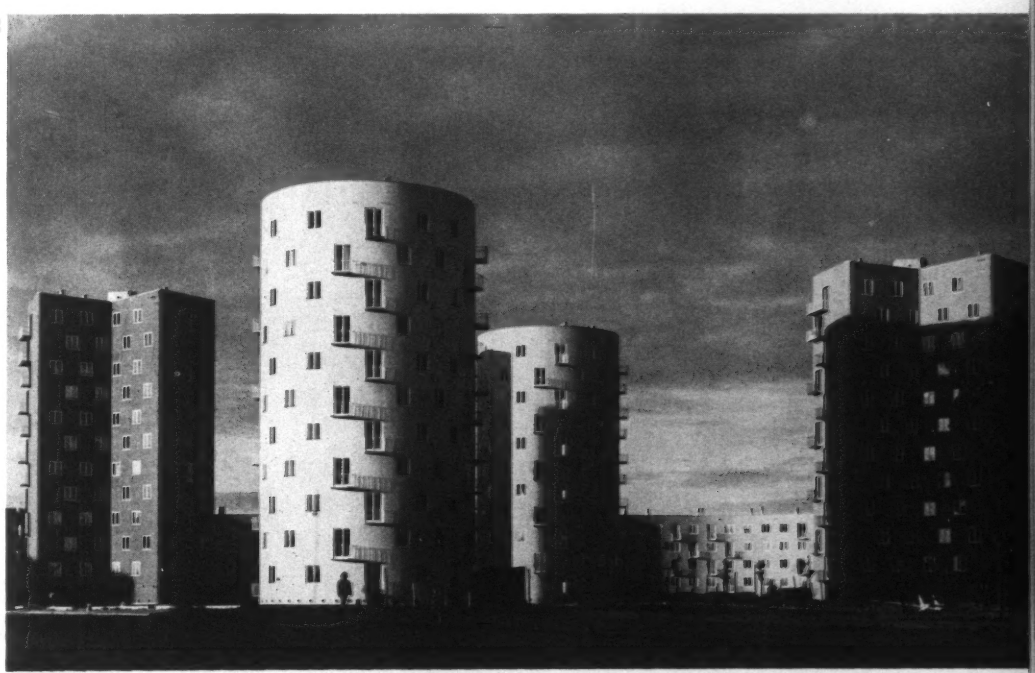
1. Cité de l'Abreuvoir, Bobigny

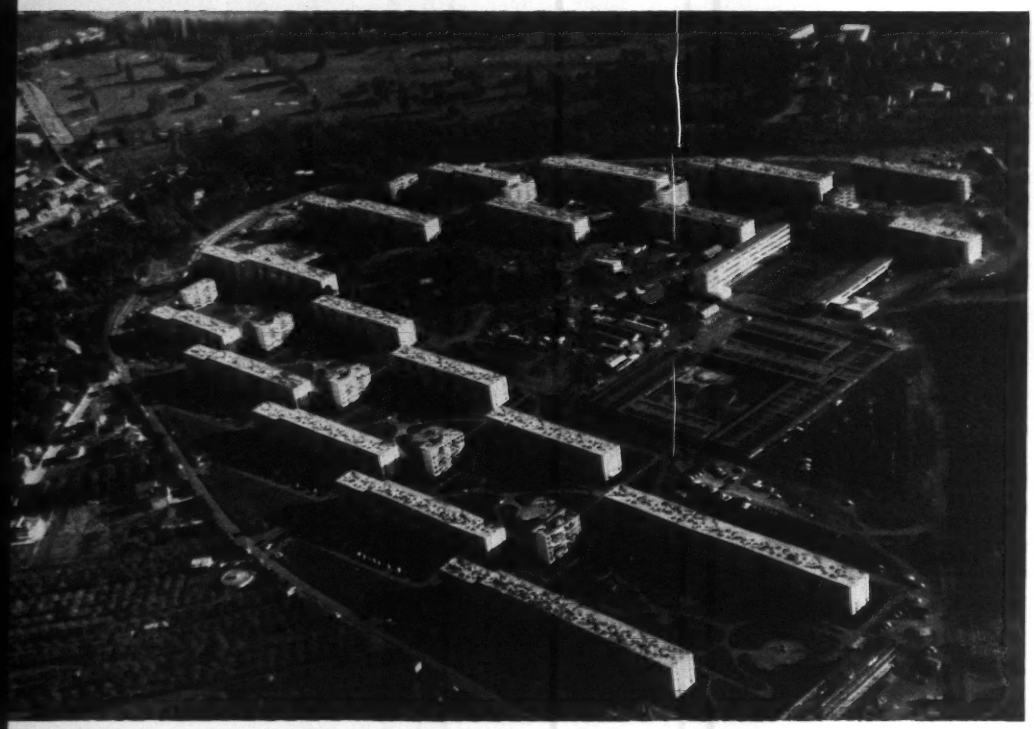
architects : Aillaud and Vedrès

1, the complete scheme from the air, showing the kind of subtopian environment into which it had to be fitted, and against which the architects revolted, intending to create instead a place endowed with 'un visage particulier et frappant.' The 1,500 flats are disposed in six towers and lower serpentine blocks, and the carefully landscaped grounds linked by a traditional *allèe* of trees.

2, eleven-storey towers from the south-east.

2





3

4

2. les Grandes Terres, Marly-le-Roi

architects: Lods, Honneger and Beufé.

3, the air view shows the striking formality of the plan, which organizes the heart-shaped site into an almost symmetrical composition, along whose axis the ground falls slightly towards the north (top left of picture). Socially, the scheme is intended as a complete small town of 1,500 apartments, equipped with everything needed for human life—'sauf le travail.'

4, close-up of part of one block, showing the standardized prefabricated façade elements used throughout the scheme.

5, general view inside one of the 'courts'—in spite of the anathema pronounced against parallel planning by some architects (such as Aillaud) *les Grandes Terres*, with its staggered main blocks and the use of small blocks to stop off the vistas, is by no means monotonous or lacking in sense of place.

5

6

3.

les Buffets, Fontenay-aux-Roses

architects : Lagneau, Weill, Dimitrievic and Perrotet

6, each of the residential blocks at *les Buffets* is a four-storey cube, with normally four flats per floor ; the construction is orthodox reinforced concrete framing, but the striking in-fill panels are of bakelised wood.

7, although each of the eleven blocks which contain the 261 apartments has its sides parallel to all the other blocks, they are not ranged in rows, and their siting on the irregular terrain comes nearer than any comparable French example to the free and informal siting favoured in northern countries (the planning of this development was discussed in AR, May, 1961, page 325).

7

4.

les Blagis, Sceaux

architects : Beaudouin, Chaillier, Fournier and associates

8, this enormous block with a façade some fifty bays long, at *Sceaux-les Blagis*, emphasizes the willingness of French housing architects to allow some single powerful form to dominate a scheme even when there is no overall formality of plan. Nearby, on the other side of the Avenue Jean Perrin, is a remarkable free-form shopping centre designed by Andrault and Parat, who were associated with Beaudouin in the design of both housing schemes at Sceaux.

8

5.

les Bas Coudrais, Sceaux

architects : as above

9, *les Bas Coudrais* also exhibits the same giant scale in plan, but the blocks, though long, are of more conventional form. The 766 flats are housed in a mixed development of high and low blocks, with façade treatments that are very consistent in character in spite of variations in details as large as balconies.

9

10

6. Domaine de Beauregard, la Celle de Saint-Cloud

architects : Warnèry and Gravereaux

10, conspicuously unlike other Paris housing in architectural character, and much closer to North European models, this scheme's three to five storey blocks (according to the fall of the land) are traditional in conception and construction.

11, where they are comparable to other French work is in their large-scale grasp of the landscaping possibilities presented by the site, a piece of handsome parkland that lends itself to confrontations of house and lawn in the grand manner.

11

7. les Courtillieres, Pantin

architect : Emile Aillaud

12, the sheer size of the serpentine block which—with only three breaks—encircles the main part of the site, shows that the propositions about the creation of distinctive and striking places, made by Aillaud in connection with *l'Abreuvoir* (**1,** page 319) have

12

13

here been carried to a point of complete resolution. As a demonstration of a style of urbanism, the plan is definitive and the forms of the buildings inseparable from it. 13, air view, showing the basic *parti* of the plan, a vast central close walled in by the serpentine block, and clusters of off-lying towers, of which those in the foreground are still under construction.

14, the thirteen-storey towers ; the external cladding is of complete factory-made panels (on the Camus system, related panels are used for the schools which serve this 1,200 flat scheme). It will be noted that the subtle precision of these panels has been enlivened in places by the efforts of lace-obsessed French housewives to re-establish older norms of domestic privacy while travellers from Le Bourget will remember the striking blue façades.

14

typical floor plan: ground to ninth floor

criticism

Jurgen Joedicke

Parliament Building, Stuttgart

Architect: Erwin Heinle, in collaboration with A. Kiessling, H. Schmidberger and B. Winkler (chief architect to the Baden-Wuerttemberg Ministry of Finance, Horst Linde)

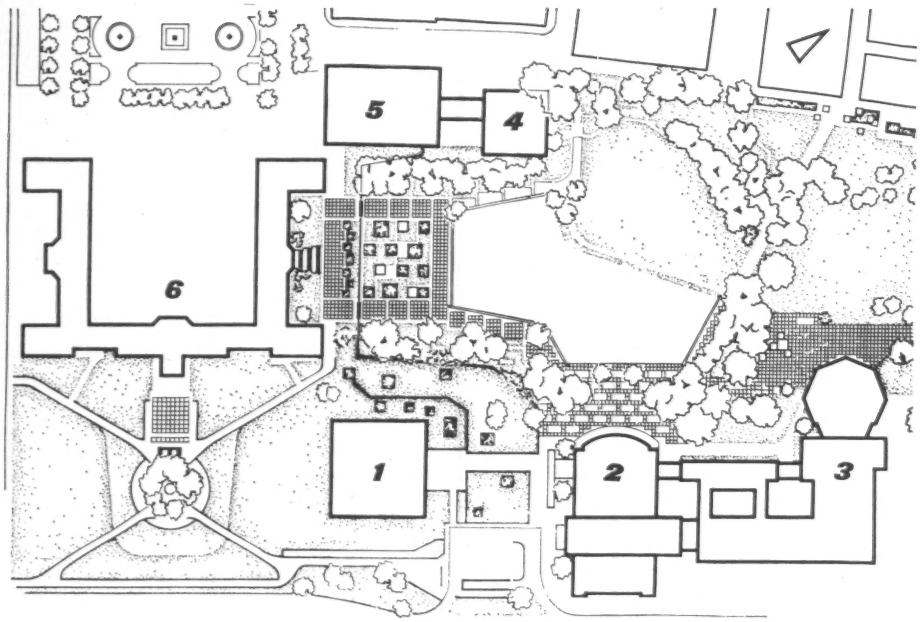
Stuttgart, the capital of the German *Land* Baden-Wuerttemberg, lies in a narrow valley, surrounded on three sides by steep hills, open only to the north-east towards the river Neckar. From the north-east a long strip of green parkland stretches into the centre of the city, where it ends in front of the New Palace, a baroque building designed in 1744 by Leopold Retti. The recently-completed Parliament of Baden-Wuerttemberg—the subject of this article—stands in this park, next to the palace.

The decision to erect a new building for the Parliament was the outcome of long discussion. It was originally intended to rebuild the New Palace, which had been partly destroyed during the war, as a new home for the *Land* Parliament. A competition was therefore held in 1953 to determine whether a reconstruction of the ruined palace could provide the necessary accommodation, but as an alternative competitors were also allowed to submit projects for a new building. The result of the competition was surprising: the first three prizes were awarded to designs for a new building next to the Palace. P. von Seidlein and Ulrich von Altenstadt were awarded the first prize; their project containing essential ideas which the later plans for the building are based on. As a result the prizewinners were invited to enter a second competition for a new building to stand in the park near the New Palace. In October, 1957, the jury awarded the first prize to the Mainz architect K. Viertel, but insisted on a number of major changes. The final design was worked out by Erwin Heinle of the Architect's Department of the Baden-Wuerttemberg Ministry of Finance under the direction of Horst Linde as chief architect, in collaboration with A. Kiessling, H. Schmidberger and B. Winkler. The New Palace was not pulled down, but was restored and now contains ministries and the *Land's* official entertainment rooms.

The problem of building a parliament is a new one for modern architects. The only possible comparison in Germany is with the Federal Parliament in Bonn, but that is a modified building of the 1920's, not a new one. Oscar Niemeyer's Parliament in Brasilia was built at the same time as that in Stuttgart, and Le Corbusier's design for Chandigarh is now nearing completion.

The function of a parliament demands that it contain a chamber, committee-rooms large and small, rooms for party groups and Deputies, and a large number of subsidiary rooms. Basically it is therefore an office block made up of a number of separate rooms. But this purely utilitarian interpretation of its function cannot do justice to the real nature of a parliament. The architect must seek beyond pure function to find the essence of his problem. A parliament is a meeting-place for the representatives of different opinions, a place where men talk and search for accommodation between legitimate interests. The architects and the members of the Parliamentary Building Commission

1, *opposite, the baroque statuary of an earlier concept of government and patronage—the Staatstheater—reflected in the sober, glazed facade of a building intended to express the inner nature of a free and open democracy, the new Parliament House of the* Land *of Baden-Wuerttemberg, in Stuttgart. In the article that begins on this page, Dr. Joedicke assesses the degree of success with which the architects have created a democratic building in a setting of unusual historical and architectural character.*



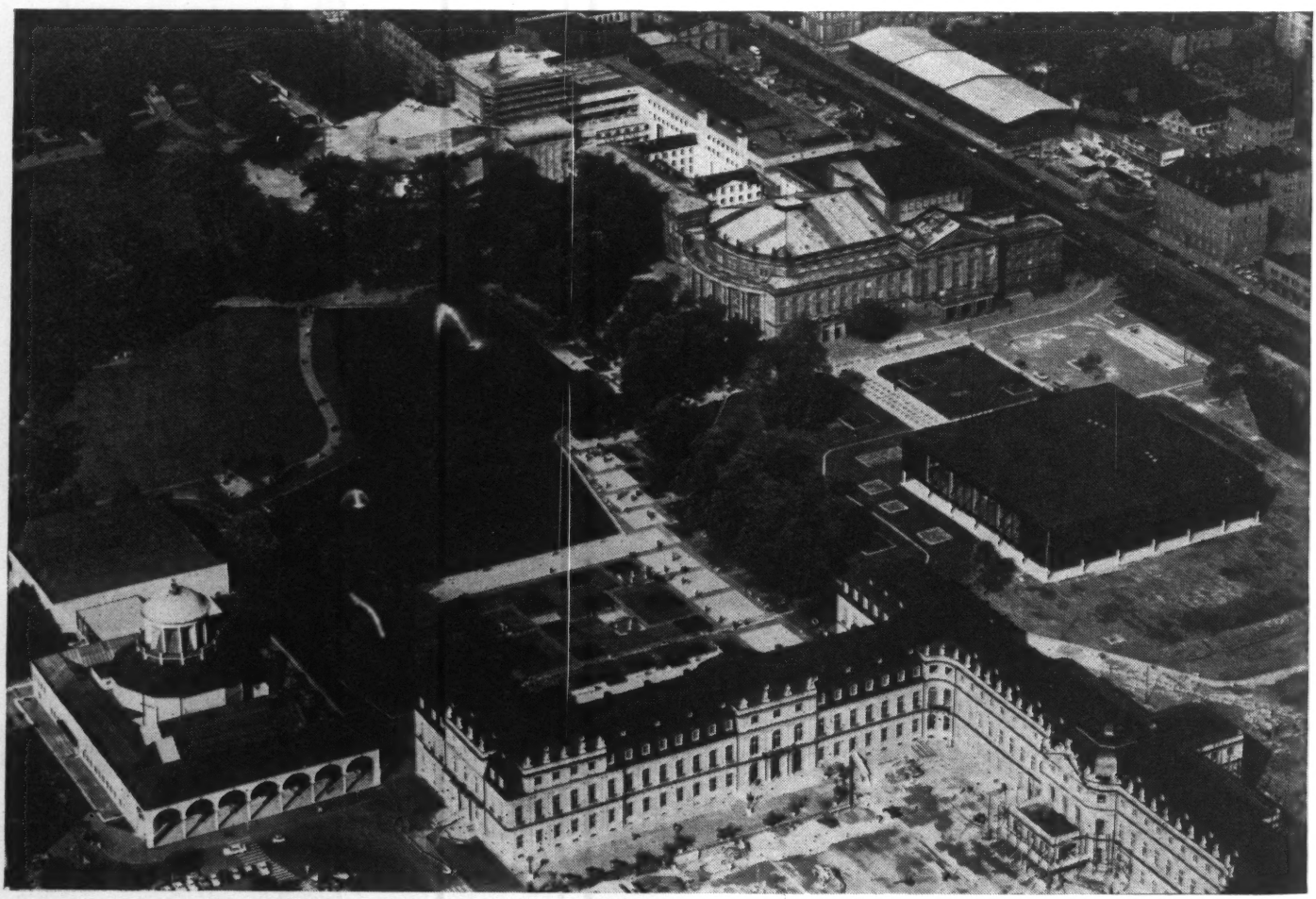
site plan
1, parliament building.
2, theatre.
3, little auditorium.
4, extension to art gallery.
5, art gallery.
6, New Palace.

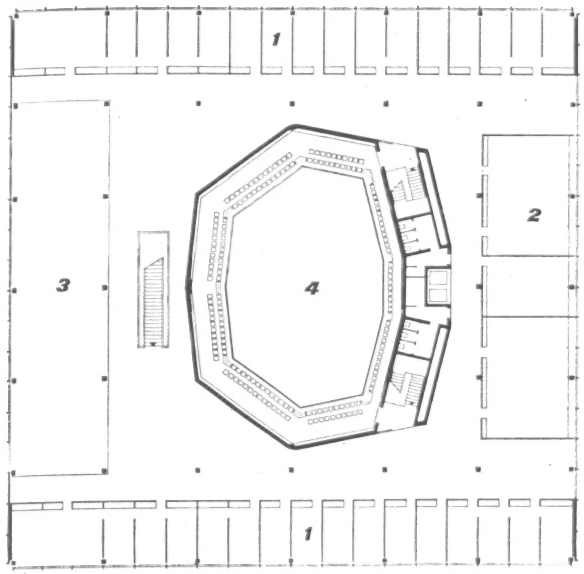
2, the setting of the new parliament building, right, with the Neue Schloss in the foreground and the Theatre beyond (cf. *site plan above*) *and the new landscaping of the lake and park.*

felt that of all possible ground plans, a square one would best express this aspect of a democratic system.

However, a parliament is not only a place where compromises are made between different groups who have sent their representatives to sit in the assembly, but also a permanent meeting-place between elected representatives and their electors. Because of this the building was also to be a concrete expression of openness and free accessibility. Finally it has to radiate the dignity due to the assembly of a people's freely elected representatives.

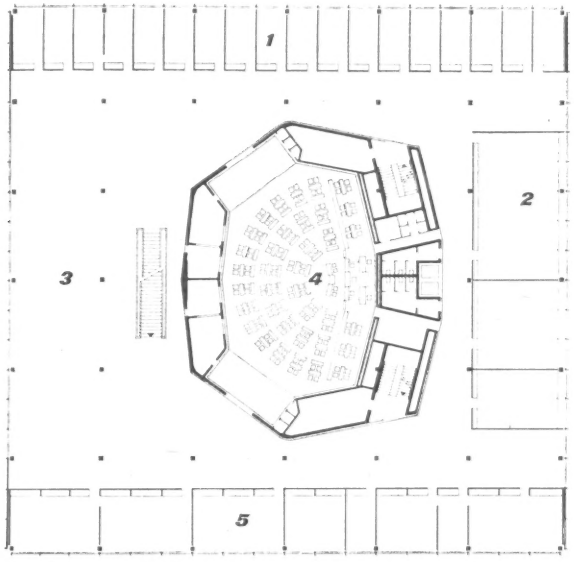
In addition to the general considerations there were also some special ones dictated by the position of this building. It stands in a newly laid-out park, next to the New Palace and the Wuerttemberg State Theatre, which was completed in 1912; directly opposite the Art Gallery, built from 1902 by Theodor Fischer, the Grand Old Man of the Stuttgart school, and Paul Bonatz's teacher; and diagonally opposite the tower of Paul Bonatz's railway station (1911–1928). This is a collection of varied but distinguished buildings, almost a museum of recent architectural history. Meanwhile Guenter Wilhelm has built an addition to the Art Gallery, and Hans Volkart's Little Audi-





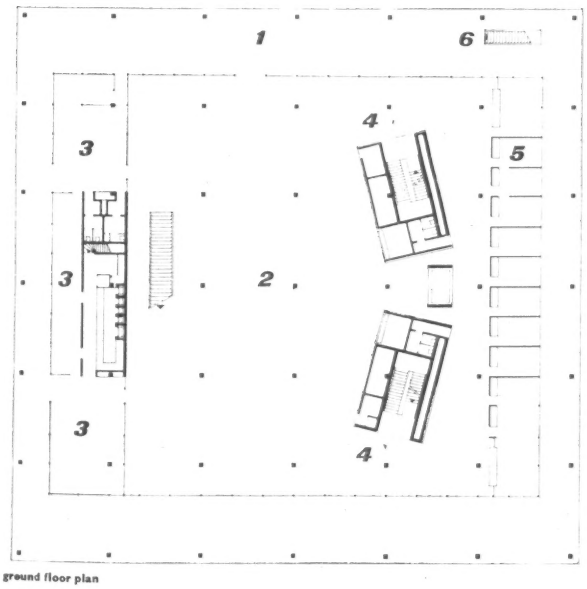
1, Deputies' rooms.
2, small committee rooms.
3, upper part of lobby.
4, gallery of Parliament Chamber.

second floor plan



1, Deputies' rooms.
2, small committee rooms.
3, two-storey lobby.
4, main floor of Parliament Chamber.
5, Government offices.

first floor plan



1, entrance
2, hall.
3, restaurant.
4, visitors' stair to gallery.
5, offices.
6, stairs from underground garage.

ground floor plan

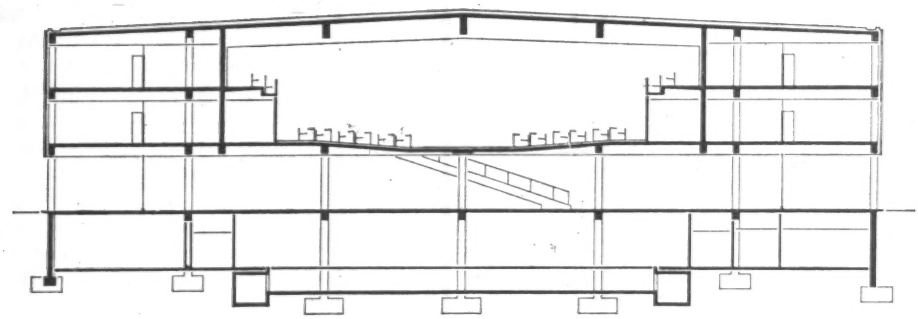
torium for the Wuerttemberg State Theatre is almost complete. To design a building that would enjoy a satisfactory relationship with the existing buildings round it, and yet radiate sufficient strength of its own to do justice to the concept of the *Land* Parliament, was an exceptionally difficult task.

The architects approached their task in the same way as the architects and master masons of earlier ages. They fitted their new building into its surroundings, not by imitating the form of other periods, but by an uncompromising use of contemporary forms, in which, however, the proportions and the arrangement of masses of the new building were determined by the scale and measurements of the structures round it. This method has been used successfully throughout the centuries: a fact which must weaken the position of the exponents of the Neo-Liberty style, who have justified their retreat from the principles of Modern Architecture by pointing to precisely this need to fit buildings into their surroundings.

The ground floor is recessed, is entirely open, and is intended as a meeting-hall between deputies and citizens. Only the restaurant and a few offices have been set along two sides of this storey. The chamber, the heart of the building, is on the first floor, with a two-storeyed lobby in front of it, the interior of the chamber rising into the second floor. The party groups' rooms, the smaller committee rooms, and the offices of the parliamentary administration are on the first and second floors, round three sides of the chamber, and only the deputies have access to these two floors. Visitors to debates go straight into the public gallery of the chamber up two diagonally-set staircases.

The building is a reinforced concrete skeleton with cross-reinforced slabs. The distance between the piers in both directions is 9 metres. The façades are of bronze curtain-walling. The windows are fixed, so as to keep out the noise of the traffic in the Neckarstrasse which passes close by, and the interior is air-conditioned. All the horizontal air-conditioning ducts lie within the depth of the beams. This solution allowed the volume of the building to be kept lower than would have been possible with suspended ceilings, but it raised structural complications, as all the load-bearing members had to have large cavities.

It is quite obvious that the form of the building and the choice of materials were influenced by the work and the ideas of Mies van der Rohe; but the important thing for the critic is not so much this dependence on the work of Mies as what has been achieved by the use of his forms. This is because his forms have such inherent strength that they can satisfactorily com-



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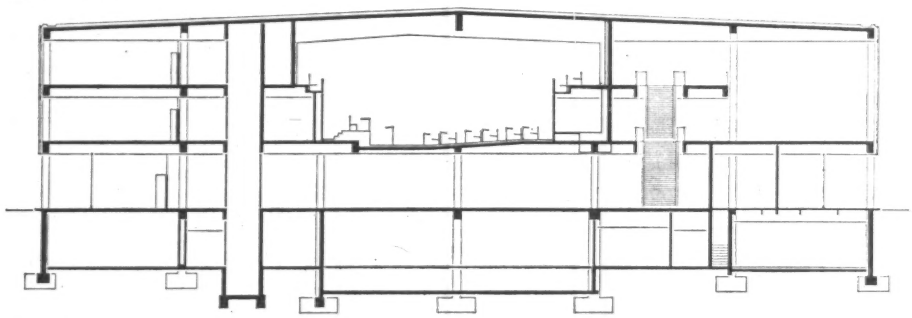
longitudinal section



cross section

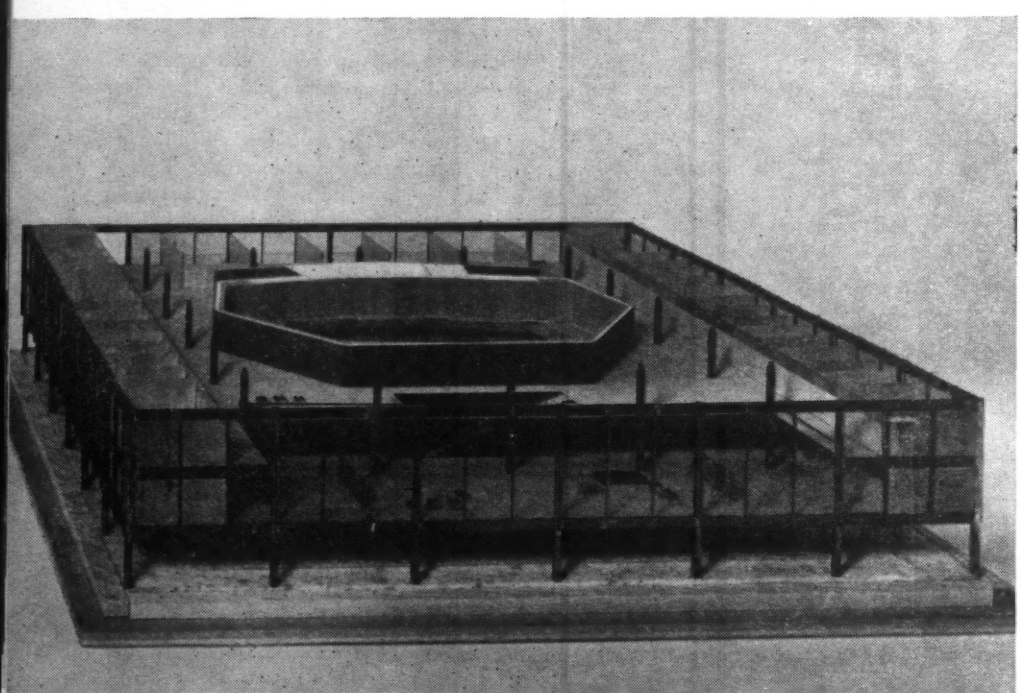
bine with other heterogeneous forms. It would be difficult to imagine a greater contrast than that between the cheerful capriciousness of the baroque and the severity, yet absolute clarity, of the new Parliament. Yet they achieve harmony, both because the proportions of the Parliament have been related to those of the New Palace and because the Parliament is free of any element of obtrusiveness or emotionally exaggerated individualism. Its forms are objective, with something of the modesty of a man aware of his own strength. The emotional reserve for which one can often criticize Mies van der Rohe's forms are here both apposite and necessary. The building lives by its cohesion with its surroundings. The large windows lay open the view into the park, with its wide spaces and old trees. The green of the trees and the colours of the flowers shine into the rooms and are reflected on their walls and ceilings. The whole building has been spatially formed and set with an exceptionally sure touch into its surroundings.

The raising of the body of the building off the ground and the completely glazed ground floor are not—as they so often are—mere gimmick, but a solution which is both necessary and meaningful. Nor does the building separate the different parts of the park, but rather connects them. Inside and outside the care which has been applied to every detail is striking. The colour-scheme is quiet, and the materials used have been limited to a few carefully selected ones. Outside, the dominant shades are the bronze colour of the curtain-walling and the white of the reinforced concrete piers; inside, the warm colour of the oak partitions and panellings. The ceilings are made of white plaster slabs and the piers are of white concrete inside, as they are outside. This moderation in forms, colours and materials is in pleasing contrast to the vivacity and the bright colours of the surroundings.

The Parliament is a typical example of rectangular architecture. The basic plan unit is a square of 9 by 9 metres. The piers divide the whole ground plan into 36 (6 by 6) basic squares. This is a harmonious solution as long as all the interior rooms and spaces are either multiples or fractions of the basic unit, but it can produce problems if there have to be rooms or spaces which cannot be fitted into a rectangular system. In planning the chamber, the intention was to arrange the Deputies' benches in a semicircle, and to make sure that the acoustics would allow Deputies to speak from their own seats and be heard without microphones and loudspeakers. This semicircular arrangement had been a success in the old Parliament, which had been destroyed during the war. The acoustics expert laid down that the outer wall of the chamber should have a broken shape, and it is quite obvious that the many corners of the chamber are at odds with the structure, which follows the square basic unit. The load of the roof structure over the chamber is led down through the massive outer walls of the chamber on to the ceiling of the ground floor but, as the ground-floor piers strictly follow the grid of basic units and cannot therefore all be placed at the points where the load is led down by the shape of the chamber, it was necessary to build complicated buttressing into the ceiling of the ground floor and the walls.

Of course it is not difficult for a good structural engineer to solve such problems,

3, the architects' model, reproduced to illustrate the basic planning problem of fitting a form adapted to the acoustics and sight-lines of a semicircular chamber into regular rectangular grid structure.



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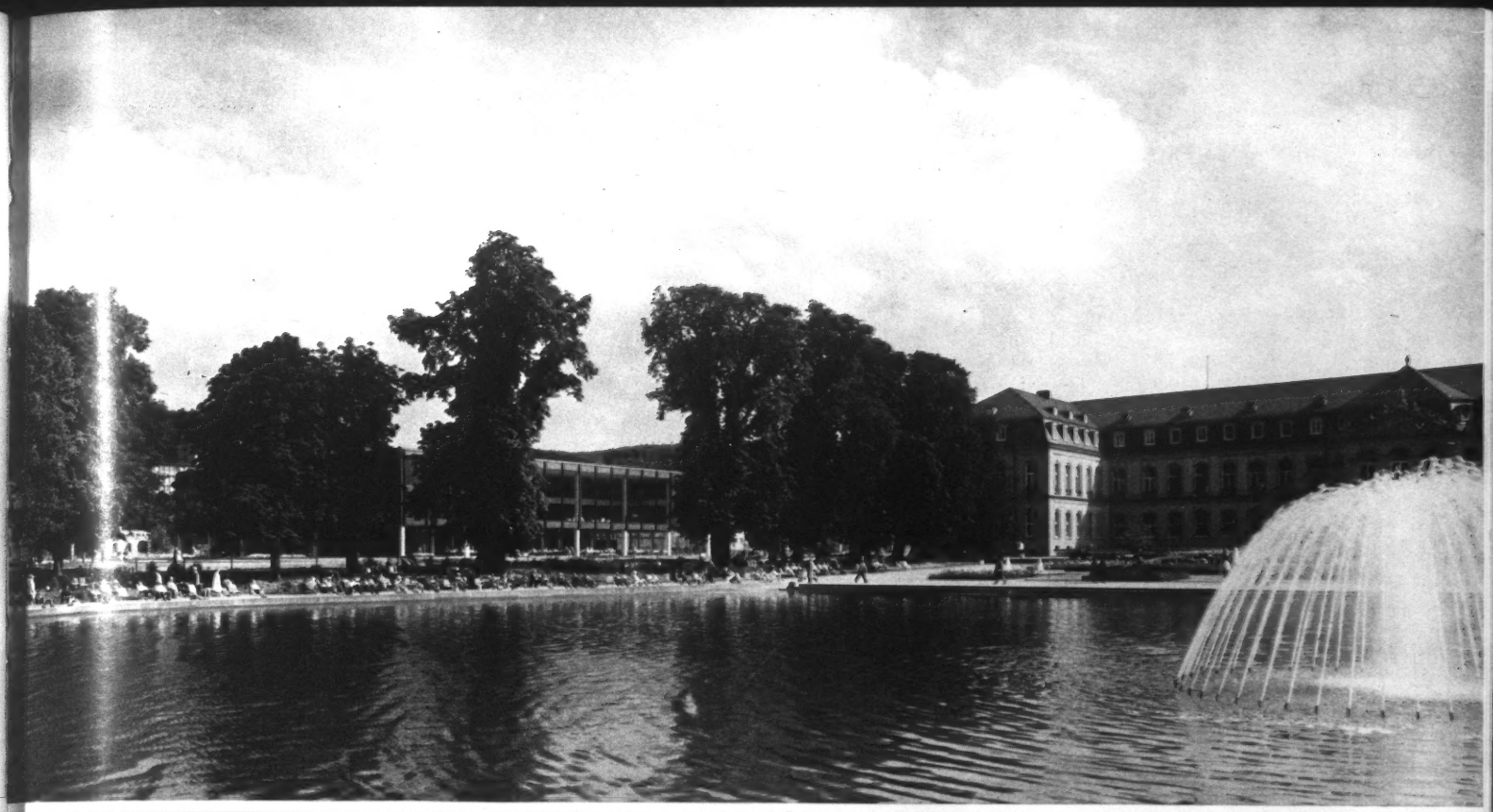
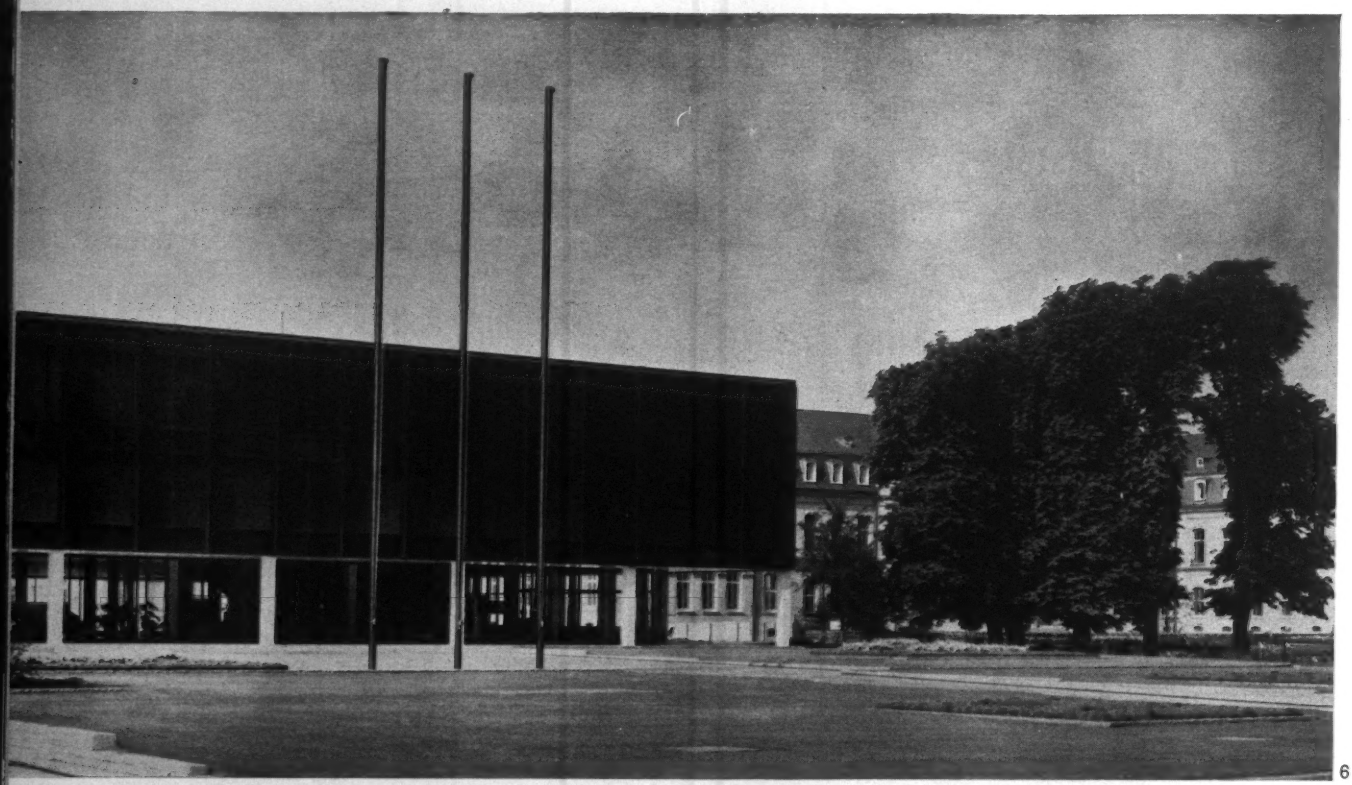


4
5

4, the Parliament building and the Neue Schloss seen across the lake. 5, night view of the Parliament building looking into the entrance, with the double range of Deputies' rooms above.

Parliament Building, Stuttgart

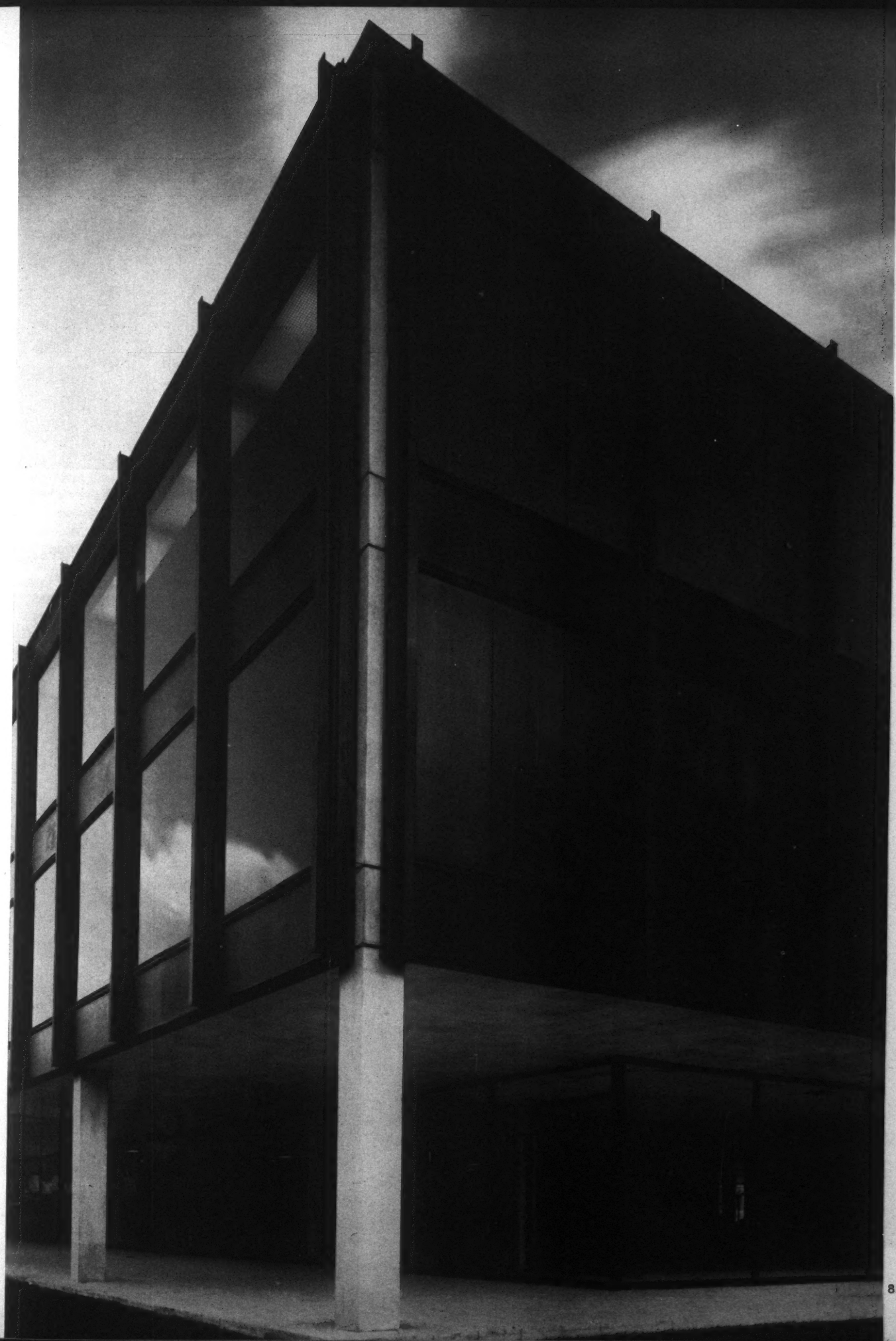
Parliament Building, Stuttgart

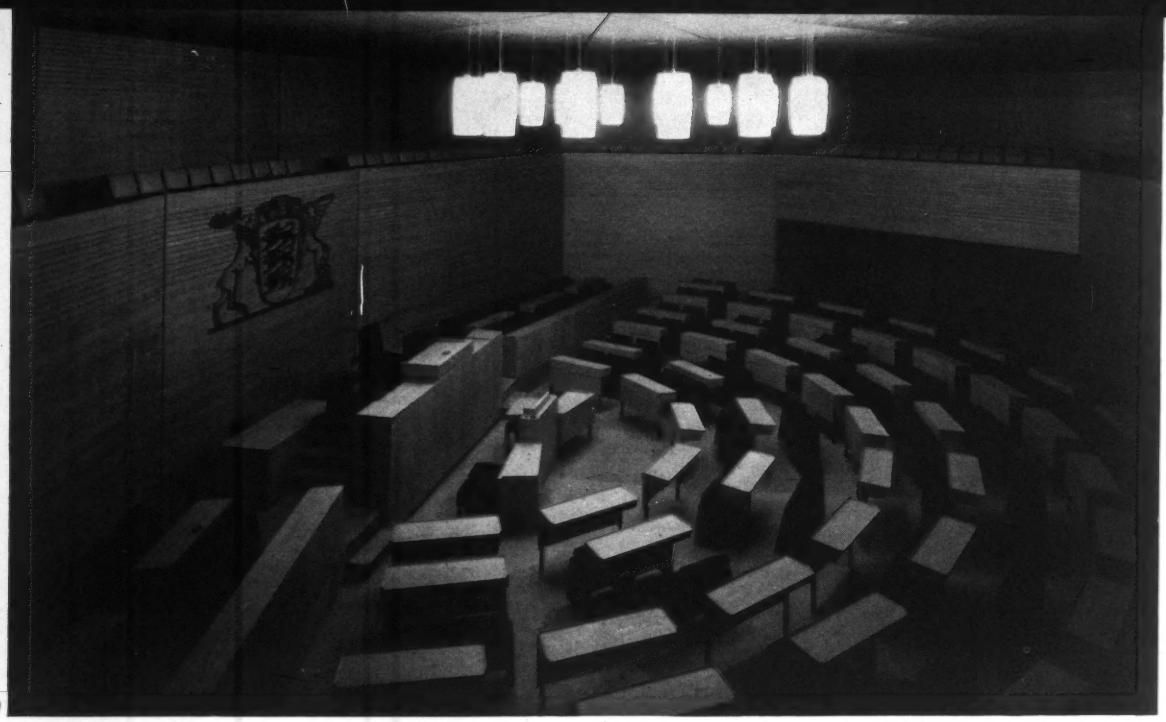


6

6, a daylight view of the entrance side, showing the transparency of the ground floor. 7, view into the park from the hall, with the portico of the theatre on right. 8 (opposite), a corner of the building, making clear both the comparison and the contrast (exposed concrete column) with the work of Mies van der Rohe.

7





9

9, *the interior of the chamber, with its simple furnishings and entrances under the gallery.* 10, *view into the park from the lobby, showing the scale of the fenestration.*

Parliament Building, Stuttgart

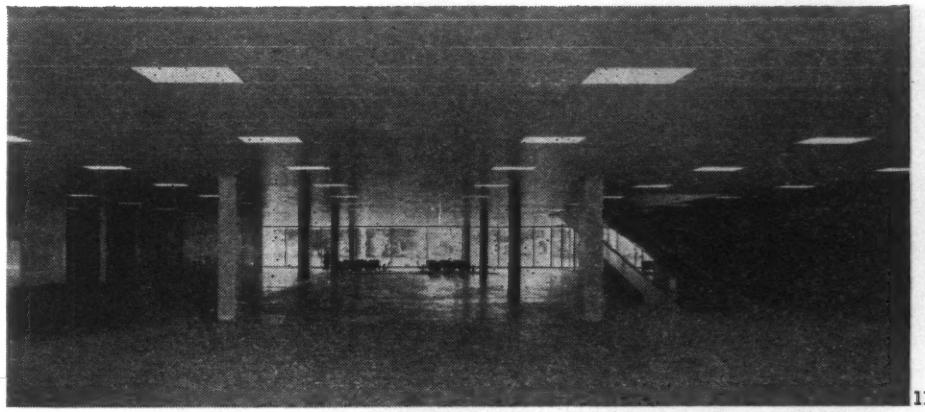
10

continued from page 328]

but any solution can only be made at the expense of overall clarity. If one accepts the principle that simplicity of form should be reflected in simplicity and logic of structure, then the solution chosen is a questionable one. There was a sequence of earlier designs in which the chamber stood free in the building, detached from the ranges of offices round it, and only connected to them by corridors like bridges; but this solution, which follows logically from the structure of the interior, was later rejected.

The square basic plan chosen for the Parliament emphasizes the equal orientation of the building towards all four sides. This basic formal principle is given expression in the placing of the building. It stands on a small but appreciable hump, where it can be apprehended from all four sides, and its solid part seems to float free in space as a plastic mass. The logic of its form demands that the building should be accessible from all four sides, and the recessed ground floor emphasizes this possibility, but for practical reasons (to keep control of visitors) it was finally decided not to open the building from all four sides. The entrance is now along a quite explicit main axis, which is taken up inside by the layout of the entrance hall. The offices on the upper storeys are also set on an axis, but this is at right angles to the entrance axis.

The way in which the façades are hung in front of the structural framework poses a number of further questions. The four corner piers run in full view from ground level to the roof line and are quite clearly separated in the exterior elevation from the curtain-wall, whereas all the other outside piers are only visible on the ground floor, after which they disappear behind the curtain-wall. From outside they cannot be seen behind the dark glass of the upper storeys, nor can they be inferred from the external articulation of the façades. Moreover the aesthetic emphasis on the corner piers is a contradiction of their function, for each corner pier bears only about half the load carried by any of the other piers. If visual uniformity is a criterion of Modern Architecture, then there is a choice between two main possibilities: either the curtain-wall can be laid over the whole structural skeleton like a skin (no structural member being visible from outside), or the whole structure can be shown directly or indirectly by a specific articulation of the façade hanging in front of it. To return to the Parliament, it must be added, however, that at night, when the whole interior is illuminated, the corner piers diminish in emphasis, the remaining outer piers come into view and the curtain-wall becomes clearly



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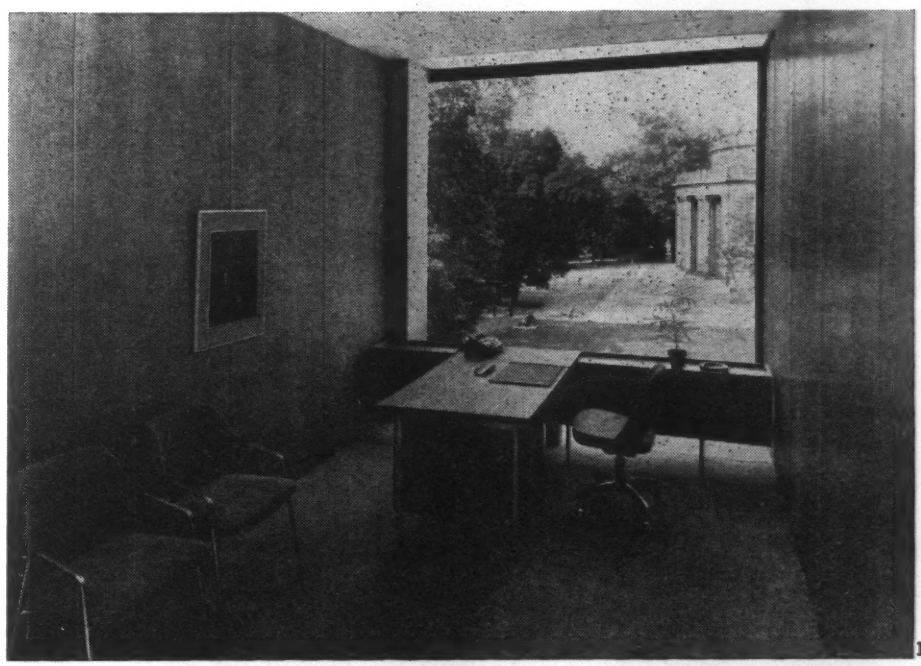

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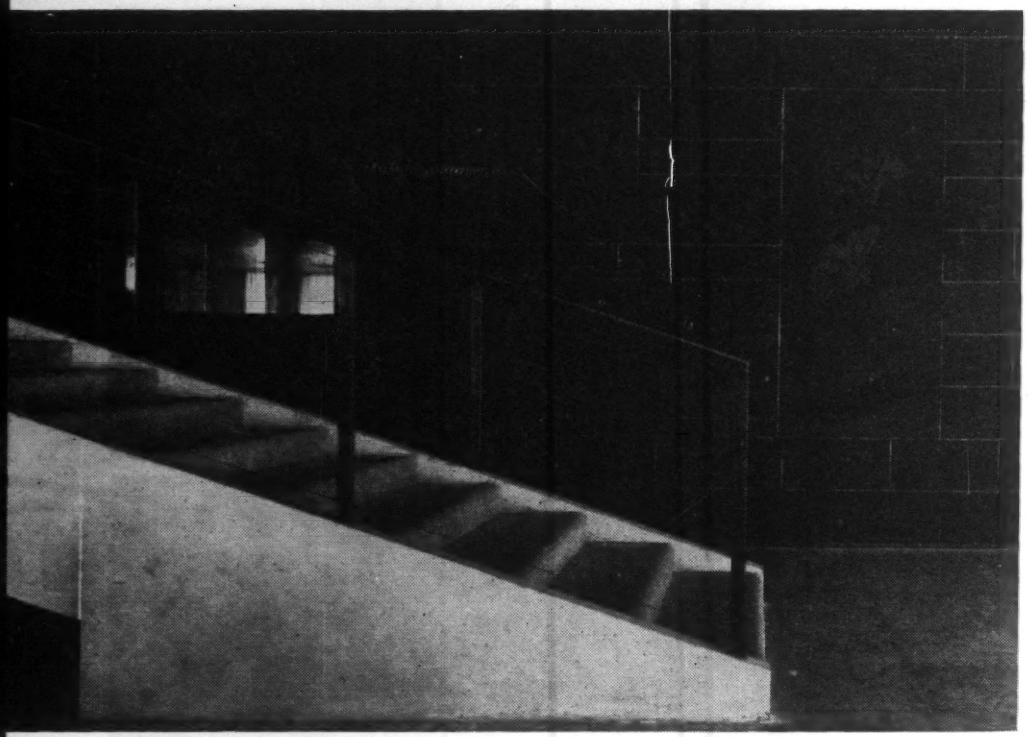
13

11, *view through the hall, with Deputies' stair at the right, visitors' stairs and lifts at left.* 12, *one of the Deputies' rooms.* 13, *the restaurant on the ground floor.*



14, *the foot of the Deputies' stair, with sculptured wall behind—the relative absence of works of applied art in the Parliament building is a conspicuous abstinence in representative buildings in Western Germany.*

recognizable as a skin hung in front of a visible structural framework.

Another possible criticism is of the way in which the chamber has been incorporated in the building, if the solution is considered visually. The chamber, which is the heart of the building, has been quite logically placed in the centre. This not only underlines its significance, but also has the functional advantage that it is easily reached from all the committee-rooms and other offices. The trouble is that the chamber cannot be seen to exist. The only thing that the unbriefed visitor sees from outside is rows of offices, for the chamber lies hidden in the building. Even if he goes into the great entrance hall, there is nothing to suggest the existence of the chamber on the floor above. Indeed the regular grid of the piers on the ground floor seems rather to suggest that the same rectangular system is continued in the upper storeys. The shape of the chamber only appears on the first floor—where only the Deputies may go. Of course this criticism is easily answered: for example by arguing that it was not necessary to continue the shape of the chamber above the roof-line because the height of the two floors available was perfectly sufficient. But this argument is irrelevant, for here economy is not the determining factor, just as it was not in the choice of the square as the basic form of the plan. The question is whether or not the essential nature of a building should determine its basic form. In Brasilia Niemeyer has exhibited the two chambers as three-dimensional masses. What makes his solution questionable is the lack of congruence between the outer visible form and the reality of the arrangement inside; the shapes of the chambers and rooms inside bear no relationship to the grandiose simplicity and plasticity of the exterior form. It remains to be seen how successfully Le Corbusier solves this problem at Chandigarh.

This comparison of the Parliament in Stuttgart with the solutions proposed at Brasilia and Chandigarh shows that the problems are related and that they turn up regardless of location. This is because the underlying question is how, granted that function is satisfactorily fulfilled, to express what is essential in a parliament and its position in a democratic society. The basic plan at Stuttgart, and the way in which the chamber and the Deputies' rooms are related to one another, is one of the possible solutions. And in spite of criticisms, it is an impressive piece of Modern Architecture, for it demonstrates two facts: that Modern Architecture has the means to solve the problems posed by representative buildings with simplicity and dignity; and that it is possible to fit a building into an environment rich in tradition without sacrificing any of the essential principles of Modern Architecture.

ID
a monthly review of interior design

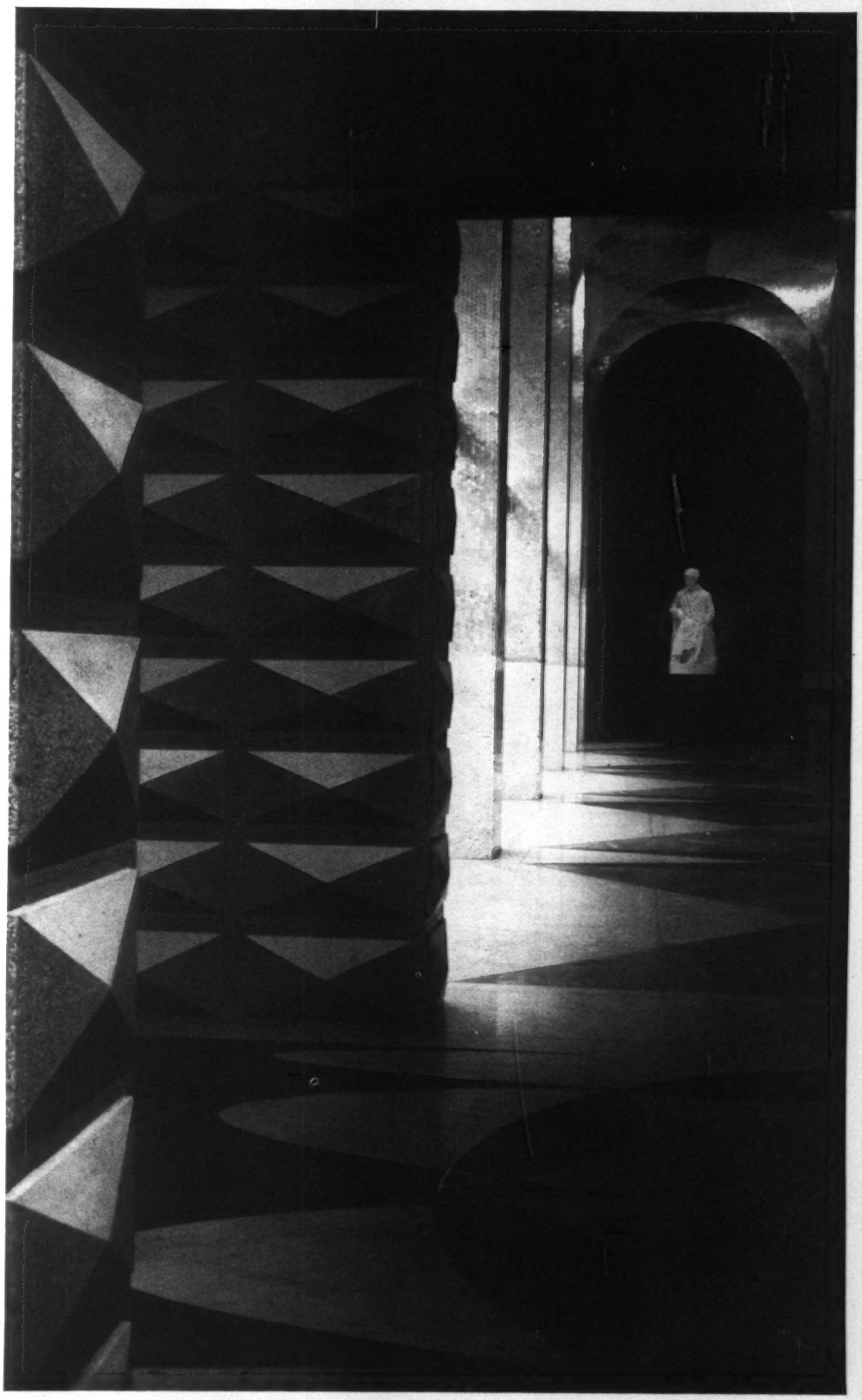
Bank in Lombard Street

Architects : Brett, Boyd and Bosanquet.
Architect in charge : Francis Pollen.

Designed for Coutts's, the most traditionhallowed of British bankers, in the heart of the City of London's banking zone, this consciously classicising interior is an attempt to give an apt setting to a client whose continuing traditions are expressed in such terms as tail-coats and superb neo-Classical furniture that survives from the last century. Unlike the architects whose banking architecture did so much to de-value classicism in England, the designers have returned to the fountain-head of Banker's Classical—the freedom, erudition and formal austerity of Sir John Soane's Bank of England.

1

1. general view of the public banking hall, with counters on left and original Coutts's furniture at right.
2. looking through the narthex at the head of the banking hall towards the cast of Chantrey's statue of Thomas Coutts at the far end of the axis. The combination of illusionistic quoin-painting (here, in fact, coloured terrazzo) with physical projection, ensures the rustication a strong visual presence even in subdued lights.



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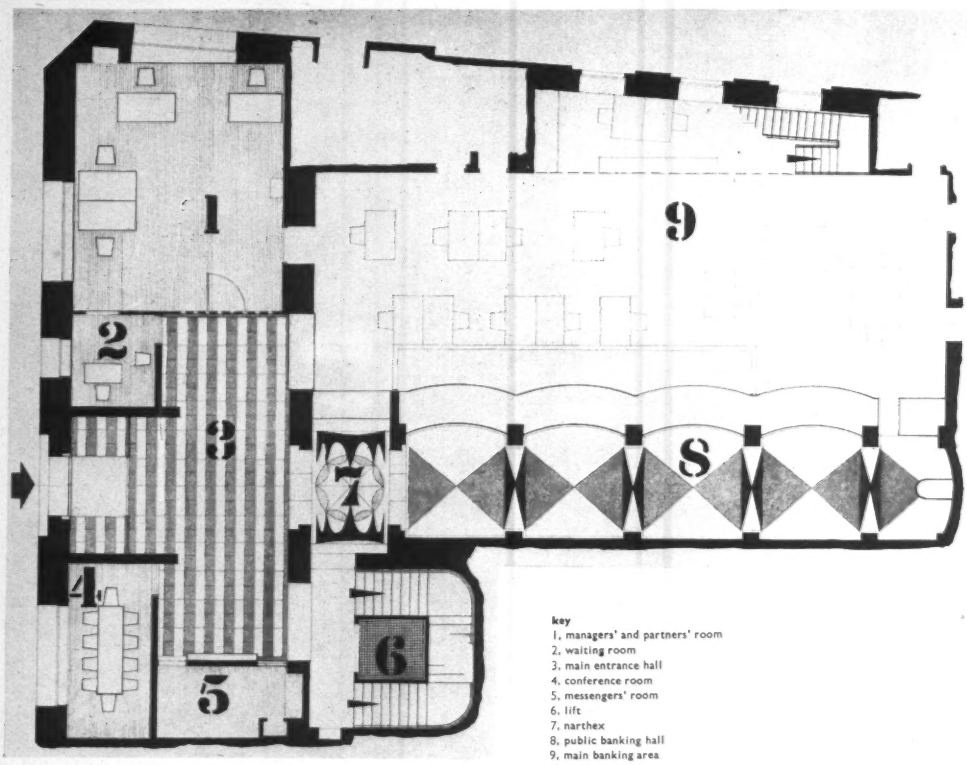

key
1, managers' and partners' room
2, waiting room
3, main entrance hall
4, conference room
5, messengers' room
6, lift
7, narthex
8, public banking hall
9, main banking area

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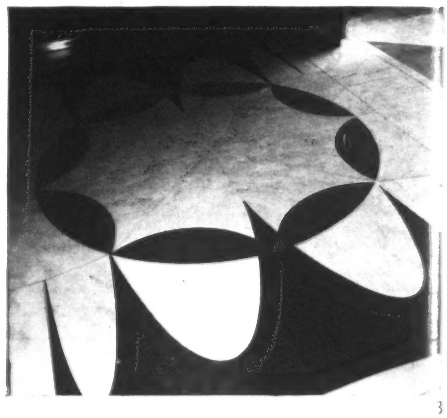
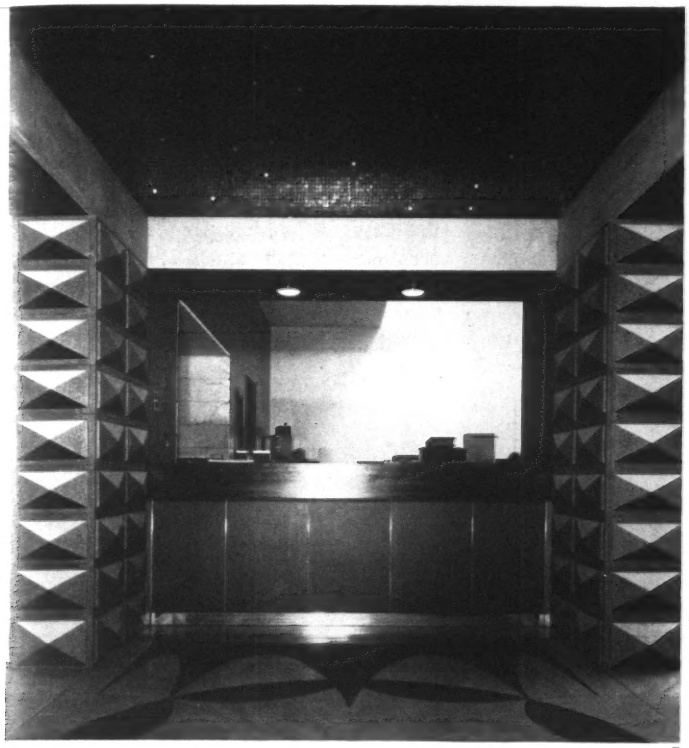


3

3, the three crowns of Coutts's emblem inlaid in the narthex floor.
4, main entrance hall, looking toward the messenger's room—the glass panel in the wall is the only sign of a gib door concealed by the pattern of vertical teak boarding. Floor and flank wall of entrance are in marble.
5 (opposite), the narthex, looking into the corner of the main banking hall. The vaulted ceiling is in dark blue mosaic with random gold tesseræ.
6, the main public banking hall, looking back toward the main entrance. The pattern of the marble flooring reflects the bay-rhythm of the gold-mosaic saucer domes above.
7, brass umbrella stand, secured to the Sicilian marble wall of the entrance hall.

4



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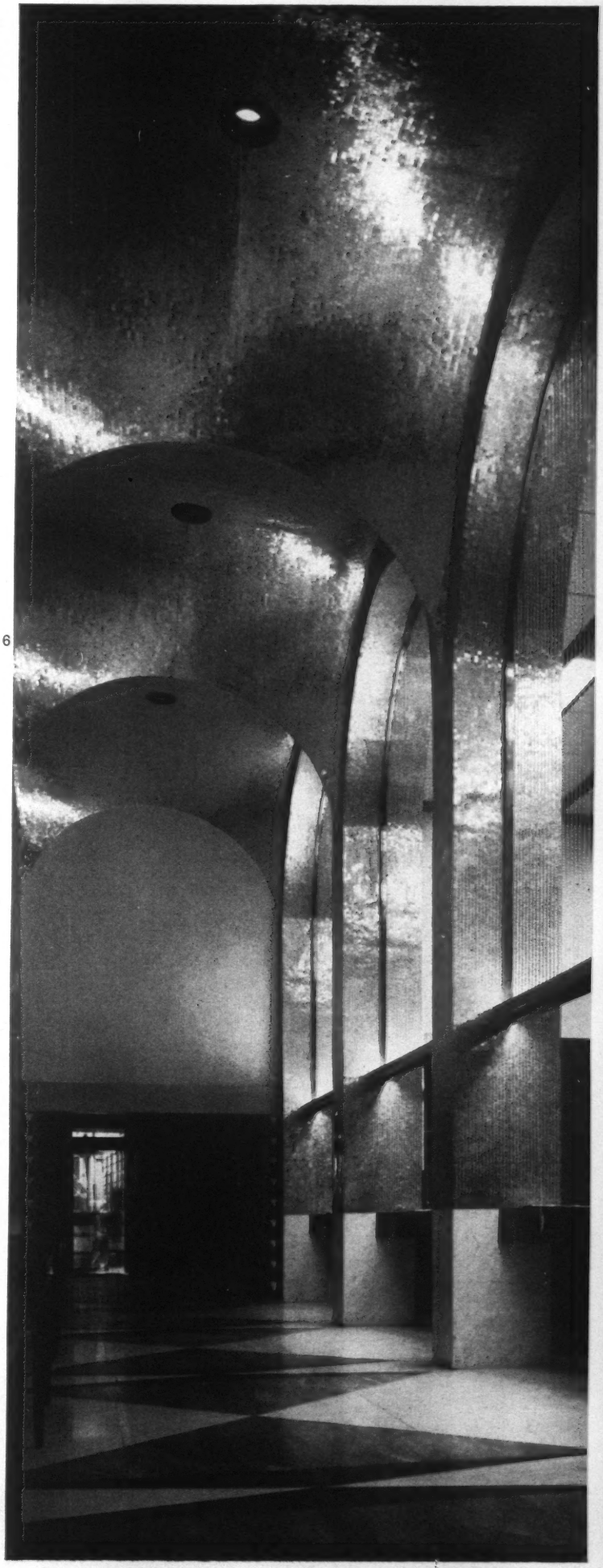


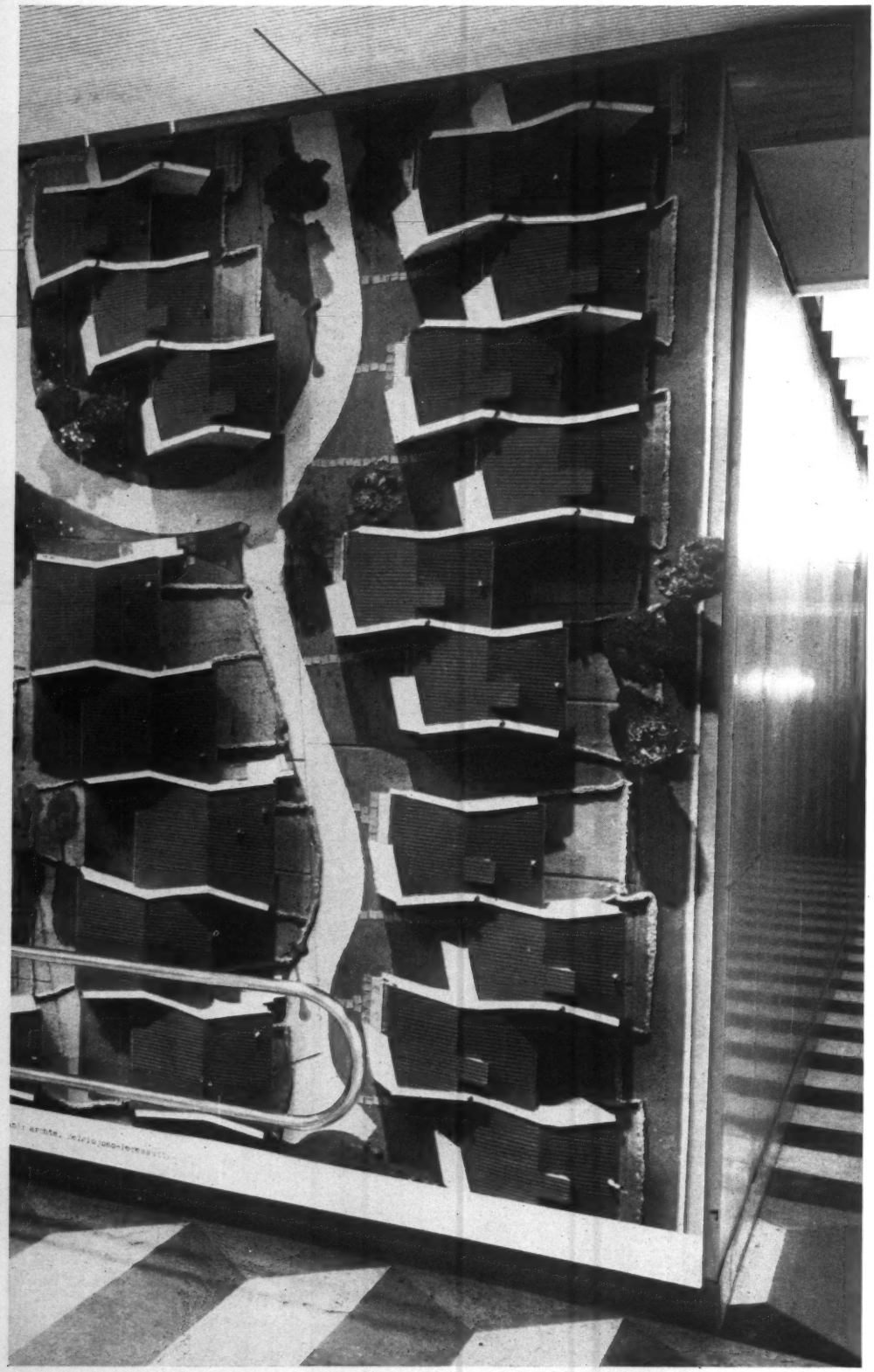
6

7

Three Restaurants for Bank Staff in the City

architects : Everson and Searles.

The architectural improvement of the public areas of banks is a movement that has now passed beyond the pioneering stage, but it should be remembered that it is part of a general overhaul of banking methods and staff accommodation. The use of computers and other progressive accounting techniques is bringing about redistributions of staff and increasing the importance of headquarters offices and specialised departments mostly located in the City of London. Hence the need to create new staff amenities such as the cafeterias and luncheon-rooms in three City branches of Westminster Bank illustrated here.



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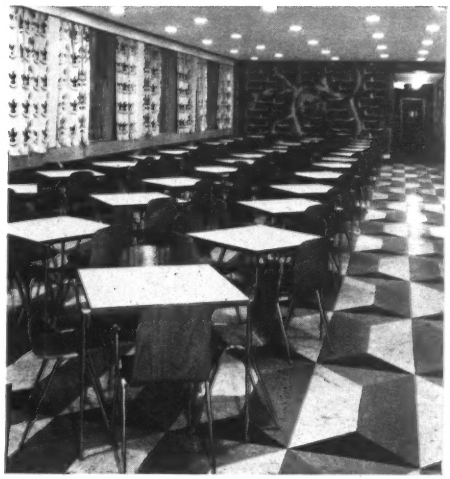

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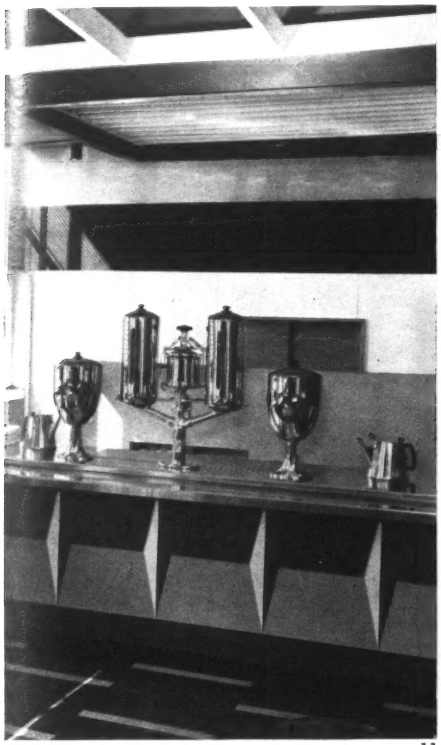
8, photomural—a view of the model of a housing development at Sesto San Giovanni, Milan, by the BBPR office—in the Threadneedle Street cafeteria. The architects have made extensive use of such murals (see facing page) to introduce illusions of depth or elements of alien scale into interiors whose scale and form is (for structural reasons beyond their control) often over-large and all-too-predictable.

9, a general view of the Threadneedle Street cafeteria, with the photomural at the far end. The giant pattern of the inlaid line on the floor also helps to reduce this immense perspective to a comprehensible visual scale.

ID

10

, officers' luncheon room, Threadneedle reet branch, on the floor above the feteria shown opposite. A less emphatic or-treatment, in keeping with a smaller or area, and the walls treated as shallow stract reliefs of coloured, plastic-faced ards. This form of wall treatment is a veloped version of a similar technique ployed in earlier schemes (see 11, below) a means of absorbing cupboard doors, bbing rails, etc., into the design of the ll.



11

11 traditional coffee-machine installation and plastic laminate bar-front in the Lothbury branch cafeteria.

12, extension to the Lothbury cafeteria, with a photomural enlargement of one of Gordon Cullen's *New Marlow* drawings (AR, July, 1950). Here, where the scale of foreground objects in the mural is almost that of real objects in front of it, the illusionistic extension of a small space is marked.

15, a familiar print of Covent Garden used as a photomural on the end wall of the Lothbury cafeteria; on the right, electrically-operated folding doors to the extension.

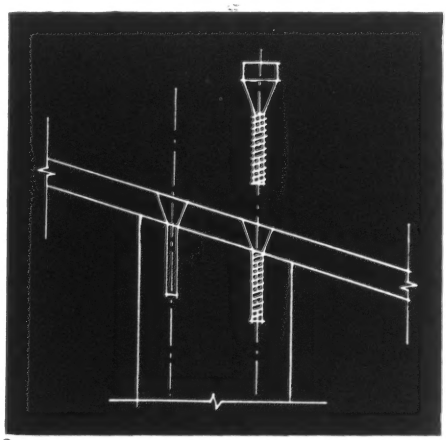
12

13

Furniture by James Howell

1

Perhaps as a hangover from wooden construction, in which screwing into end-grain is bad practice, the use of screwed construction (set-screws into tapped holes) is rare in metal furniture. These elegant pieces by James Howell of Cicchelli-Howell Associates (of Providence, RI), suggest that there is a large field of possibilities to be explored.



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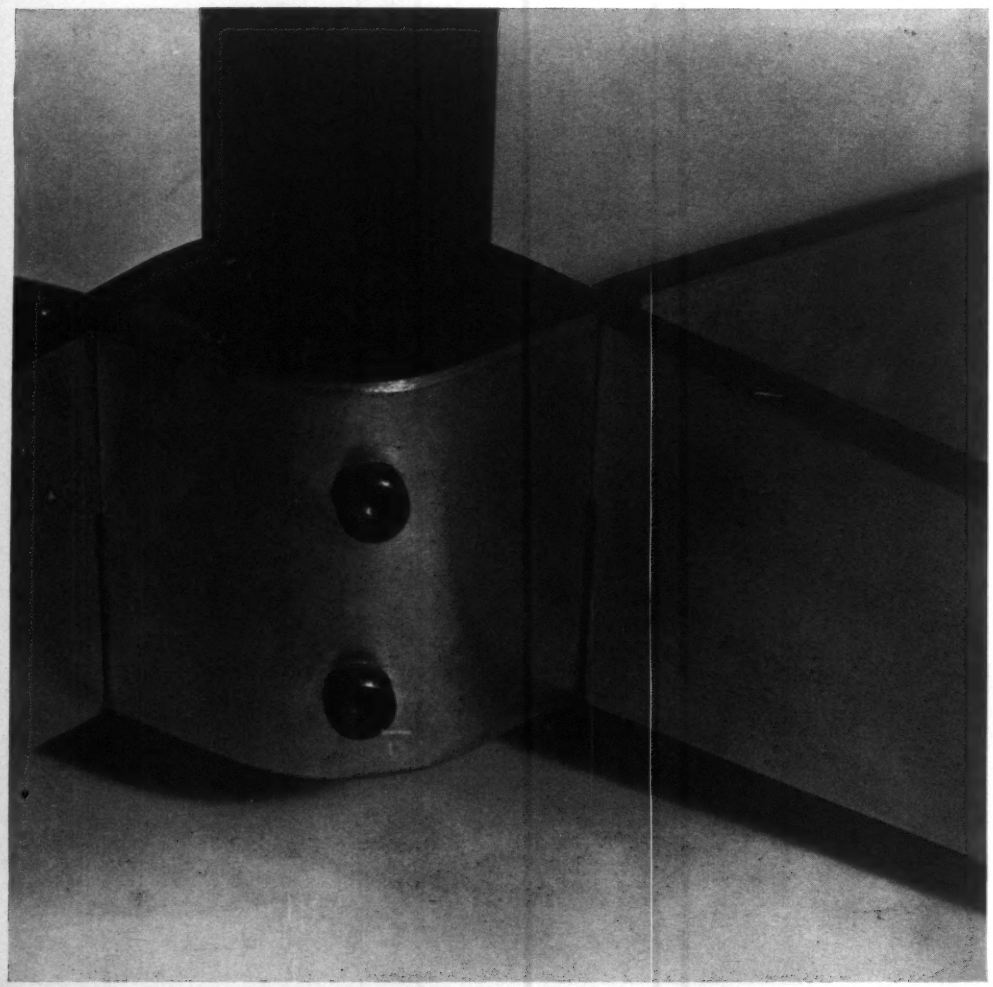
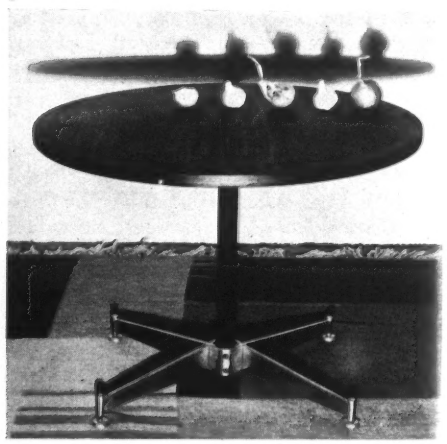


3

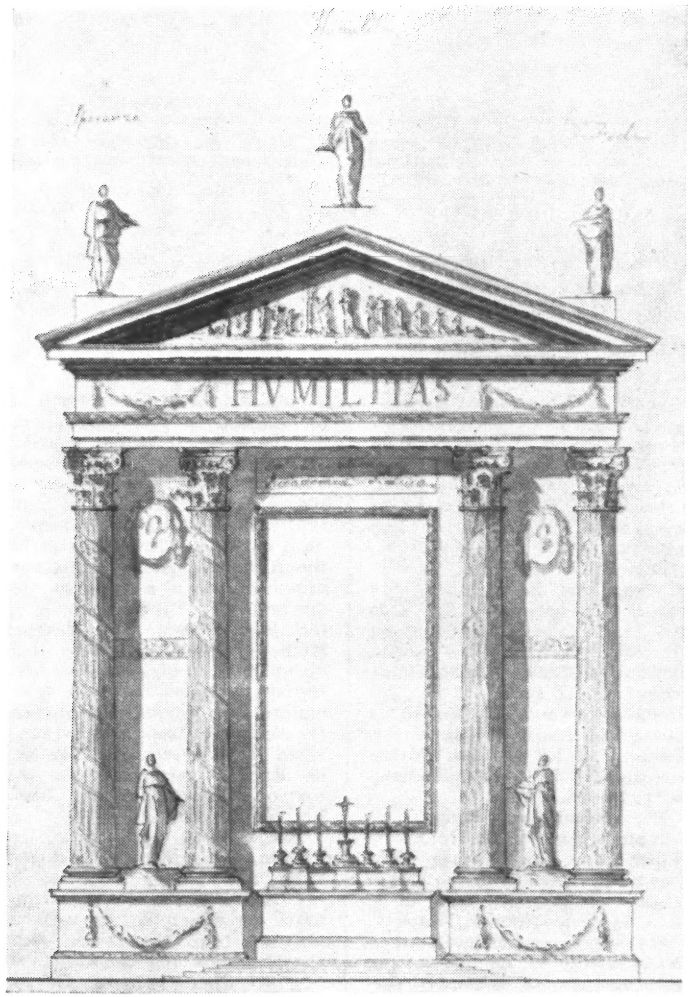
1, lounge chair—each side frame, as well as the sub-frame which carries the seat and back, is a separate piece of satin-chrome steel. The whole is assembled by two key-head screws into each end of the centre stretcher.
2, typical screwed fixing in Cicchelli-Howell furniture.
3, fixing of crossed leg units at base of occasional table—for domestic use the key head screw has the child-proof advantage of needing the correct key to unscrew it, unlike the slotted screw which is susceptible to pennies and table-knives.
4, occasional table with crossed and slotted legs.

4



JOHN HARRIS

ROBERT MYLNE AT THE ACADEMY OF ST. LUKE



1

1, altar-piece designed by Robert Mylne as his trial piece at the Academy of St. Luke. 2, design for a 'Public Building with a Memorial Gallery to exhibit Busts of Eminent Men' for which Mylne was awarded a silver medal.

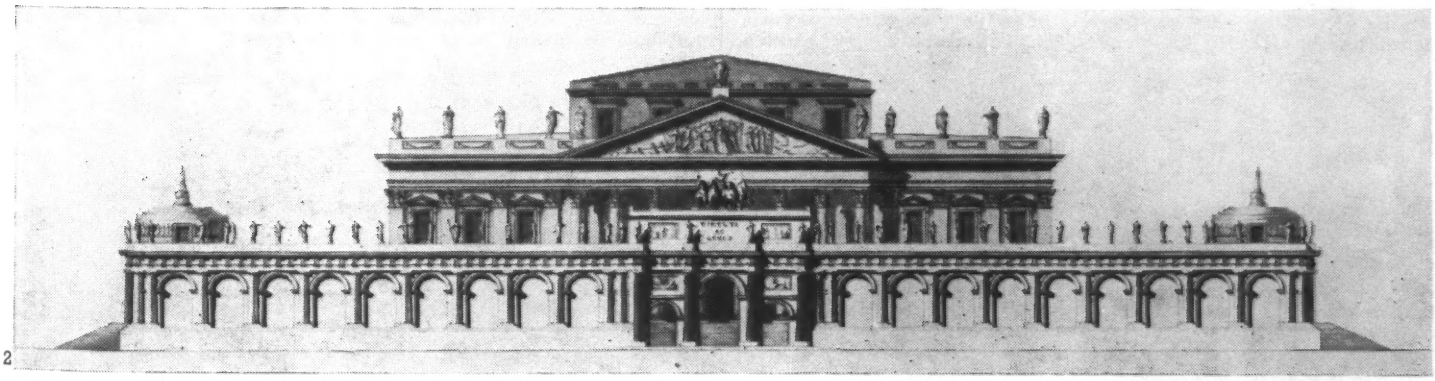
The year 1750 conveniently marks a moment in the history of neo-classicism when archaeological enquiry began to enrich the academic disciplines of the architectural student. The past was emerging as a source-book in which style was an historic entity capable of being discovered in the antique, in the medieval, and in the renaissance worlds. Soufflot was in Rome at this time and was one of the earliest architects to draw the ruins of Paestum. His importance as a neo-classicist need not be stressed here. Seven years later he was to build the church of St. Geneviève in Paris. His studio was undoubtedly influential and his tenets must have been felt in Rome through the French Academy there and its *pensionners* such as J. M. Peyre, a student of 1753. Peyre was also a member of the Academy of St. Luke, that hotbed of the conservative faction, yet a *sine qua non* for most artists. Belonging to this Academy from 1757 was Piranesi, already way out in the forefront of the movement towards the publication and dissemination of ancient and modern Rome. Just at about the same time, Piranesi's friend Robert Mylne also entered the Academy; for on September 6, 1758, he sat the examination for the *Concorso Clementino.*

Mr. C. Gotch's article* on Mylne's Italian tour and Mylne's winning design for the silver medal of the *Concorso* contains a relevant letter from Mylne to his brother William, written after the examination, saying, 'the concourse was put off on account of the pope's death. However on the 6th of this month the drawings were put in. On the 7th we made our Provas in the space of two hours before the Academicians when an altar adorned with composite columns fell to our lot in the First Class to be done.' Mylne's *Prova*, together with Gandy's of 1797, is now in the Cooper Union Museum for the Arts of Decoration, New York, where it forms part of the Brandegee Collection bought in 1938. This originally belonged to Giovanni Piancastelli, a curator of the Borghese Gallery, whose collection had been subdivided in 1901, when one half went to the Cooper Union and the other half to Mr. Brandegee. Thus in 1938 the Roman Piancastelli Collection was reunited in New York.

The *Provas* or trial pieces were no rigorous affairs. They were made by the artists and approved by the examiners verbally. Mylne's altar-piece, 1, is of a conventional eighteenth-century type and carries the dedication of Humility with the inscription, 'ex Devotione Accademia St Luca.' Mylne inscribed below the drawing, 'Li Bassorelievo sopra la colonne representano la storia della Sacra Scrittura.' Above the pediment are the figures of Humility, Hope and Faith.

Mylne's winning design, 2, for the silver medal (an elevation in the Royal Institute of British Architects) was not analysed by Mr. Gotch. It was for a 'Public Building with a Memorial Gallery to exhibit Busts of Eminent Men.' Its sources, although somewhat unoriginal, are based upon certain antique elements. It is the earliest concordance by an English architect as such and it stands near the beginning of a long line of 'Grand

* 'The Missing Years of Robert Mylne,' THE ARCHITECTURAL REVIEW, Sept. 1951.



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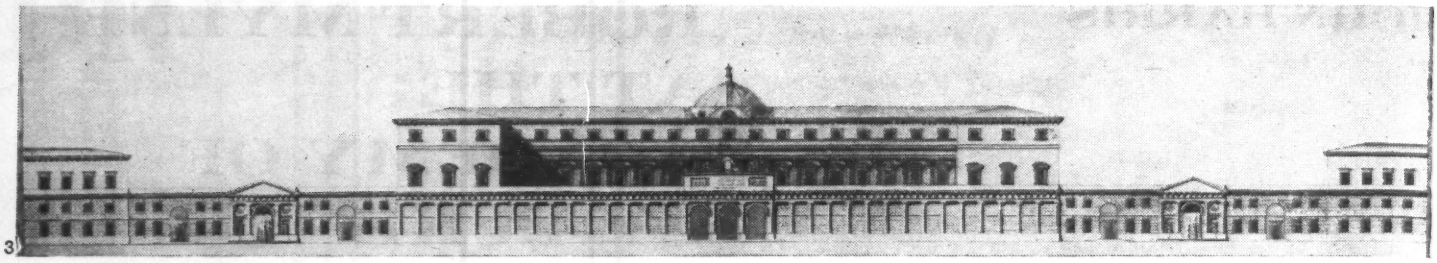
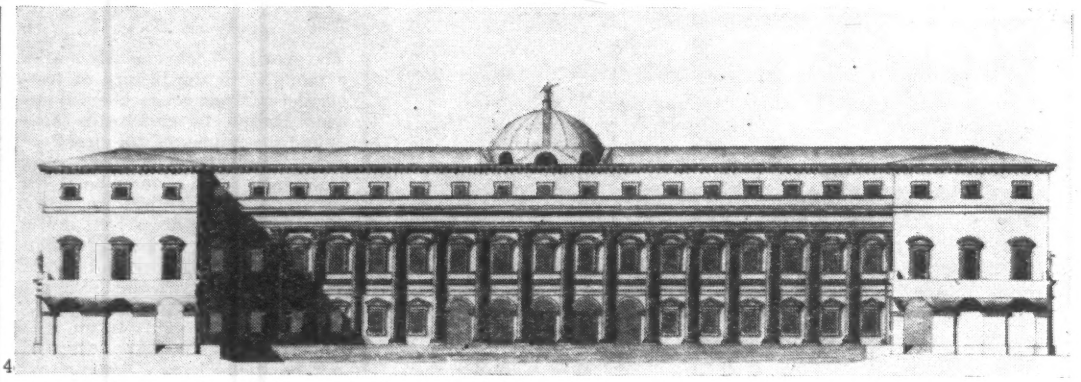




3, *Mylne's preliminary design for the* Concorso *of* 1758. 4, *detail of the inner courtyard.*

Prix' drawings that culminate in the published volumes of Allais and Detournelle early in the nineteenth century. The core of Mylne's main block has the rhythm and proportions of Michelangelo's Palazzo dei Conservatori. This is split apart, and the portico of the Pantheon is placed in between. Breaking the long Doric arcade is the Arch of Constantine. To set the neo-classical touch upon this design Mylne introduces circular stepped pavilions with a classical frieze of draped figures and surmounts them with a statue. Peyre had already designed such elements in 1753 (cf. below) and in precisely 1758 Neufforge was beginning to follow these themes in his *Receuil Élémentaire d'Architecture.*

The Accademia di San Luca archives contain Mylne's plan, side elevation, and sections to which the RIBA elevation undoubtedly belongs (and in fact completes the set). The section exhibits neo-classical tendencies also: a court-yard adorned with wall tombs; a basso-relievo frieze of figures in the vestibule (Peyre had used such friezes in 1753); and a main hall with garlanded busts as decoration and a neo-classic form of chimney piece.

It has been hitherto unnoticed that the RIBA possesses Mylne's rejected or preliminary design for this *Concorso.* In some ways these, 3 and 4, are even more startling than his final scheme. The antique elements are less apparent and there is a deliberate choice of renaissance motives. The main body of the palace has the proportions and character of a Roman building such as the Lateran. For the articulation of the inner courtyard, 4, Bernini's final Louvre design is drawn upon. Again there is the hint of Bernini in the rectangular projection on Mylne's garden front where the Louvre is also the source. It may not be a coincidence that Mylne spans his facade with an open colonnade just as Perrault did in Paris. Mylne's treatment of the rest of the facade belongs, however, in spirit to the very early years of French neo-classicism. From out of the main plane of the basement he forms flights of stairs with terraces containing fountain groups each side of a semi-circular arched motive. Below each terrace is a fountain with a circular stepped base. In front of the main elevation is a long screen of Doric columns against a rusticated stone wall. This is broken in the centre by a tripartite motive that may owe its inspiration either to an arched loggia of the Pincio Gardens (which also breaks a long wall) or to the Fontana Acqua Paola. There is a link between the latter and the fountains in Mylne's lateral wings.

The award of the prizes for the *Concorso* seems not originally to have included Mylne as a first prize winner (was it because as a heretic he had not obtained Papal permission to sit for the examination?) But the examiners Orlandi, di Marchi, Derizet, Rauzzini and Mauro Fontana thought so highly of Mylne's design that they awarded him a special first prize. Why such a neo-classic design should have merited such a response from a conservative Academy is enigmatic. It may lie with the examiners, for the second prize by Giuseppe Marvoglia was also slightly neo-classic. In any case, for the next decade, conservatism again descended upon the prize winners.

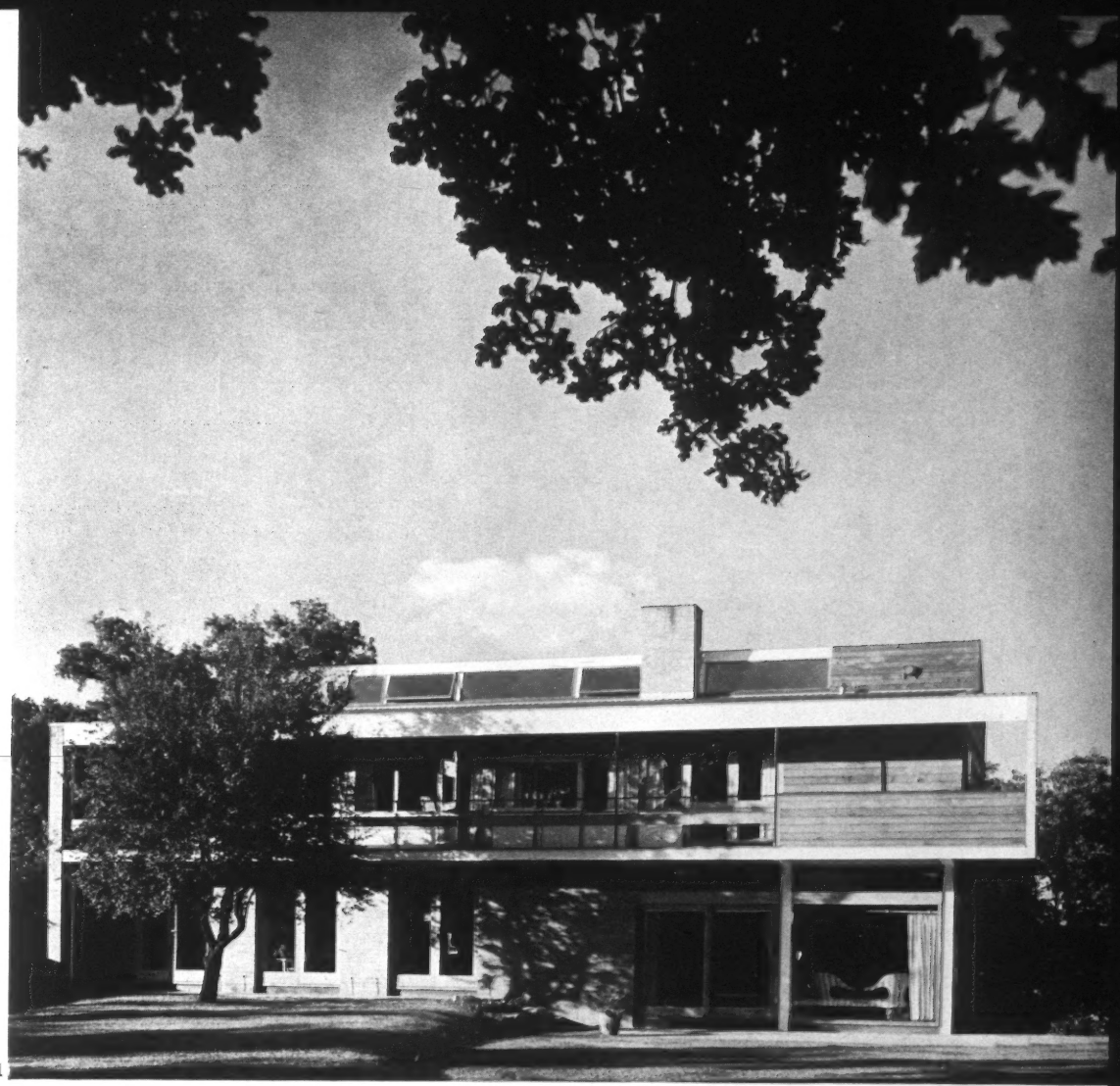
The ceremony of the prize giving was held in the Capitoline Palace attended by 20 Cardinals and 'Le Roi d'Angleterre ou Pretendent.' This was witnessed by Grosley who says, in his *Observations sur L'Italie* (1777), 'les Romains applaudissoient avec les plus grand fracas, a l'appel des Romains et les Italiens.' Mylne was consoled by 'les Applaudissements tres marques.'

For several years Mylne's design aroused interest in Rome and Robert and James Adam (their eyes always open to the danger of possible competition) knew of it. In a letter to Robert (March 7, 1761) James says he has been to the Academy to see the design, but 'was indeed extremely surprised to see it fall so much short of those ideas I had formed of it: not that my expectations were high originally but people of some taste had been puffing it extremely to me and citing Blackfriars (Mylne's nickname) as a great man. But take my word for it, if the English have eyes you have nothing to fear from that quarter.'

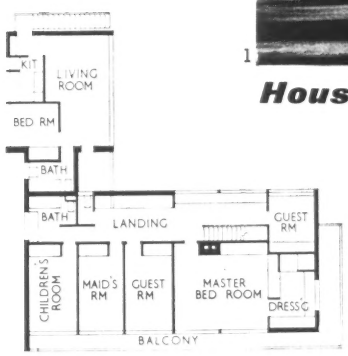
Peyre's project for a cathedral was presented to the Academy in 1753 but was not published until 1765 in his *Oeuvres d'Architecture.* As it anticipates Mylne it may be the direct link between these two neo-classicists if a personal one did not exist. Typifying many of the later Grand Prix designs, Mylne's scheme illustrates that disintegration of the close-knit Baroque composition. Yet it remained an isolated contribution to Academic neo-classicism and when Mylne returned to England he lined himself up with the current practice of Adam, Chambers and Wyatt.

Note: I am indebted to Dr. Pirotta, of the Accademia di San Luca, for allowing me access to his archives; to Dr. Anthony Clark for supplying me with an abstract from the *Decreti Delle Congregazione Accademiche* (Vol. 51); to John Fleming for his kindness in letting me use his unpublished Adam material; and to Dr. Richard Wunder, of the Cooper Union, who so kindly allowed me to examine all their drawings (and thus to discover the *Provas*).

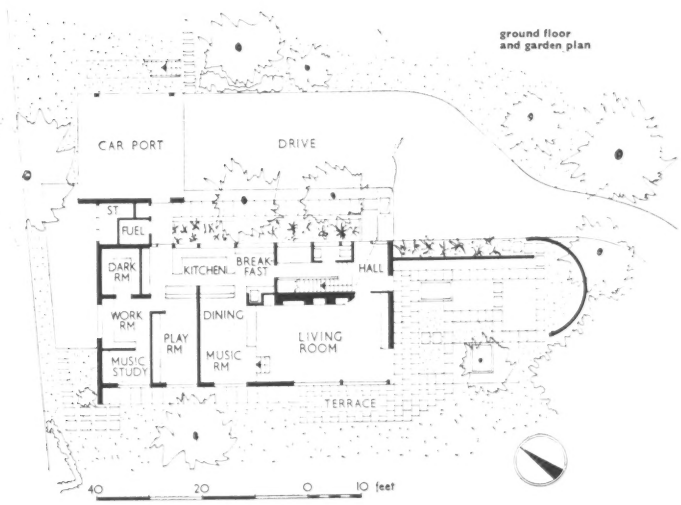
THREE SUBURBAN HOUSES



1, *the garden front, from the south-west.*
2, *corner of the master dressing-room.*



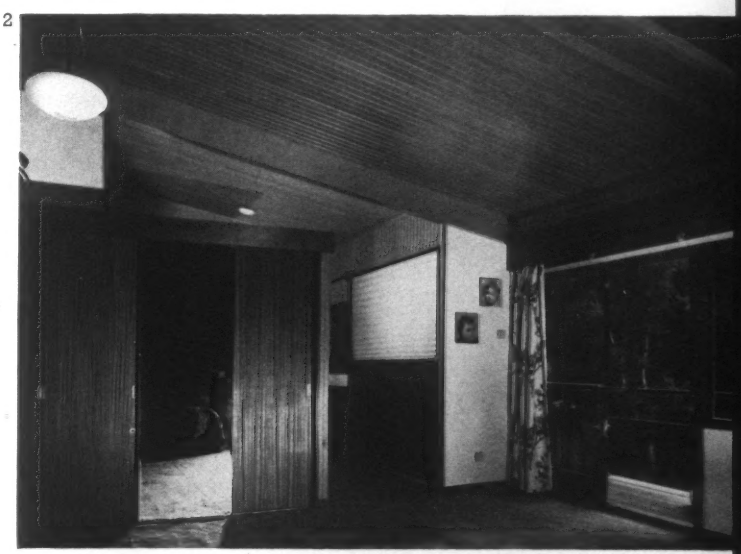
first floor plan

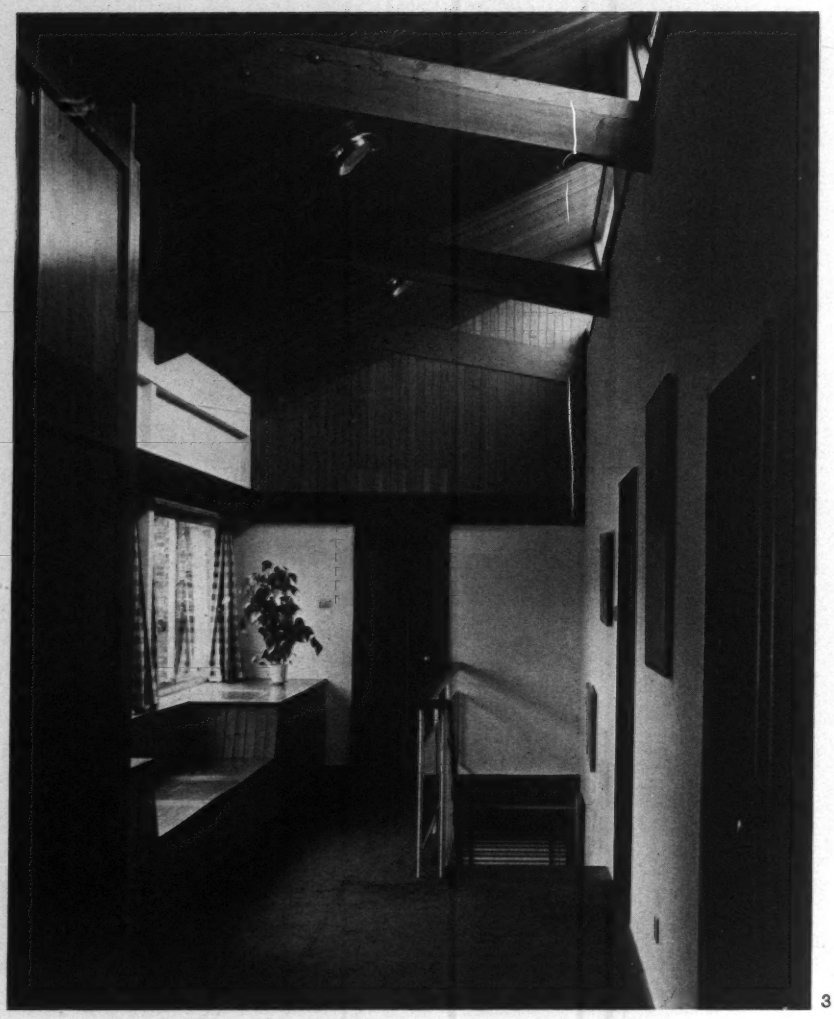


ground floor and garden plan

House at Kingston Hill, Surrey: ARCHITECT: KENNETH WOOD

The site of this house is just under an acre and was originally part of the grounds of a large mansion. The many fine trees it contained have been preserved. It has been designed as a more compact modern equivalent of the manor-house that has been in the client's family for centuries but had become uneconomic to run. In addition





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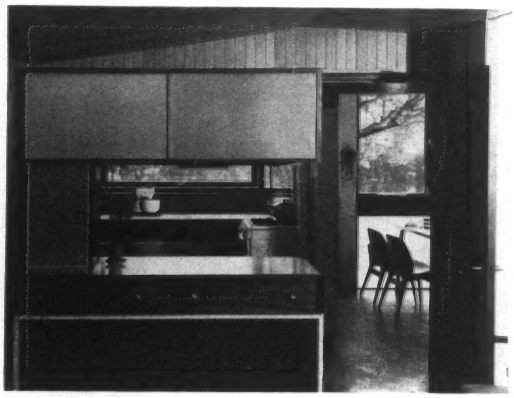
House at Kingston Hill

4

to the family's own accommodation, a private wing was required for a grandparent, communicating with the main house at first floor level. Special provision was required for live and recorded music, for small recitals of chamber-music and for art exhibitions, but without losing the domestic character.

It is a two-storey building with an L-shaped plan to give minimum exposure to the north and maximum sun, and it has been sited so as to preserve existing apple trees on the east and a large prunus on the west and to give living-rooms a south and south-west aspect with a view of open lawn. The private wing is over a car-port and is connected by a covered balcony to the first-floor landing of the main house. A change of ground level is used to create a raised dining area which serves also as a dais



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during music recitals. This area has a raked pine ceiling to act as a reflector and a cedar rear wall. This, together with a slatted pine ceiling in the living area and full-length curtains, provides the necessary acoustic absorbents. A first-floor landing, reached by a mahogany staircase with bronze and plate-glass balustrade, is designed for the display of pictures, with clerestory lighting, rough-textured white walls and an exposed scissor-type timber roof and pine ceiling.

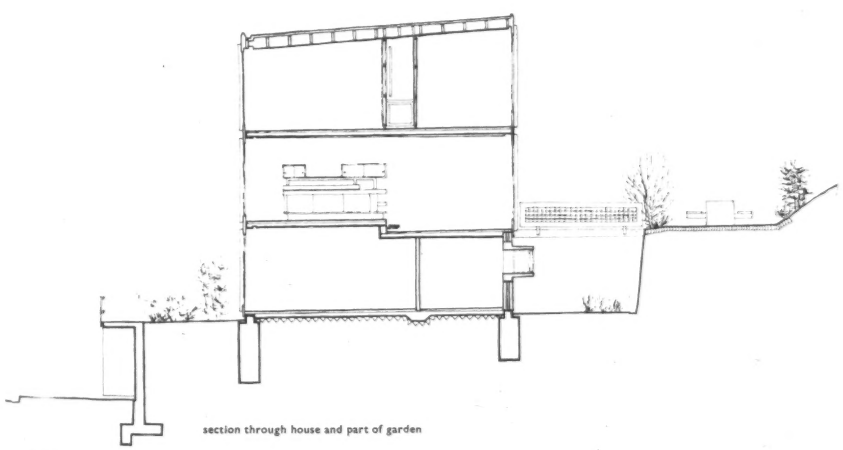
The structure of the house is basically a precast reinforced concrete frame with panel walls of 11 in. cavity brick, glazed hardwood screens on the ground floor and insulation block panels on the first floor, faced with cedar boarding. A central spine wall braces the whole structure. Floors and roofs are timber and the low-pitched roof is covered with aluminium. Window cills are black slate. Large windows are double-glazed in mahogany frames. The private living-room, main bedroom and landing have sliding aluminium sashes. Heating is gas-fired from concealed convector units.

3, landing and window-seat at the head of the stairs.
4, the approach side with car-port under private wing.
5, looking across the kitchen to the breakfast recess.

6, the back of the house, looking over the bridge from the garden.

Architect's own House, Hampstead Heath

ARCHITECT: MICHAEL BRAWNE



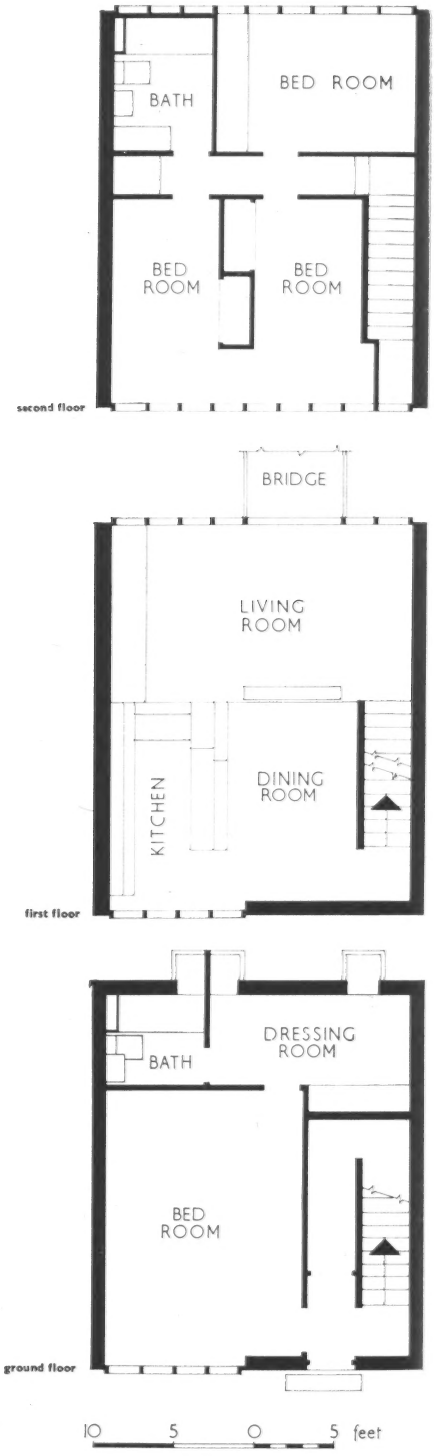
section through house and part of garden

Although South Hill Park is a Victorian cul-de-sac between Hampstead Heath and Parliament Hill, the street is urban in character and the house (on a bombed site) is intended to be unmistakably a town house in its form and proportion. It is a vertical structure helping to restore the street pattern.

Within the tight envelope which was economically necessary, the design exploits the levels of the site and the change in ceiling heights possible because of different uses. The middle floor is the main living area and is level with the garden at the rear. This floor is split by two steps into a lower sitting portion, over a bathroom-dressing room area on the floor below, and an upper dining and kitchen part. The visible space is equal to the plan area of the house with additional visual outlets up and down stairs in order to extract the greatest possible effect from a site 20 ft. wide and a house 24 ft. deep. The change in level also makes possible a partial screening of the open kitchen from the sitting space without a person in the kitchen experiencing any loss of contact with the garden and without obstructions to the supervision of children's play on the bridge or terrace beyond.

On the top floor the roof has a one-way slope parallel to the slope of the ground and the children's rooms occur

7, the street front—a flight of steps (not shown) leads down from the right to pavement level (see section on previous page).

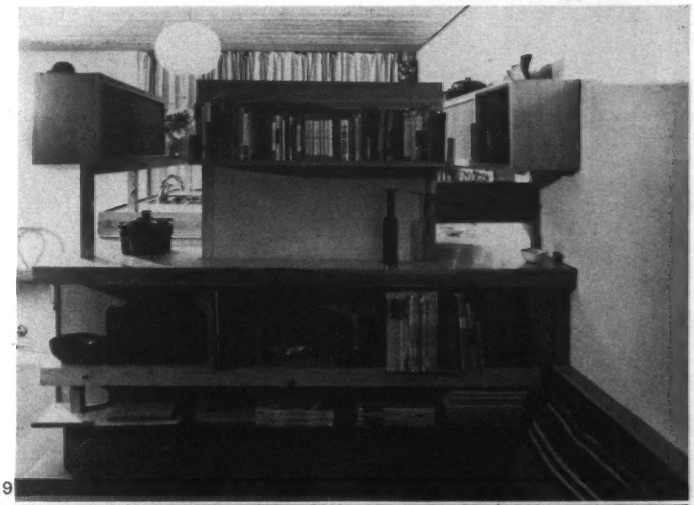


Architect's House, Hampstead Heath

under the low portion, the adults' bedroom under the high. This latter part also includes the bathroom so that the hot and cold water tanks are within the building envelope. This apparently simple house required waivers from fourteen byelaws of the London Building Acts. The structure, finishes and detailing of the house are deliberately the simplest possible. The form and materials of the building are intended to give a calm and sufficiently varied background and enhancement to the activities going on within the house. The landscaping and planting of garden will continue this feeling and consist of a brick terrace, a sand pit, trees and shrubs and rough grass on undulating ground blurring the limit of the site.

Walls are 11 in. cavity brickwork filled with loose fibreglass and left unplastered; floors are precast concrete beams and screed; the roof consists of 11 in. by 2 in. joists and woodwool covered with asbestos roofing board; windows are 32 oz. glass in softwood framing treated with a staining wood preservative and varnish; opening lights are 9 in. wide ¼ in. plate glass louvre blades. Finishes are wherever possible, natural and, in tone value, within a strictly limited range.

8



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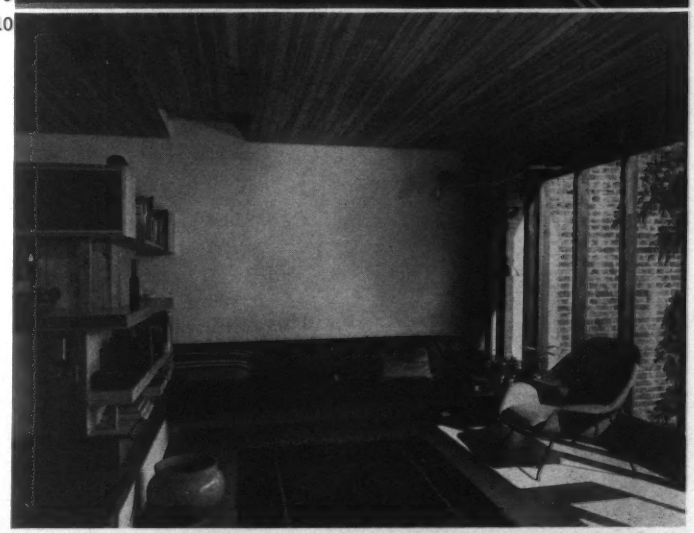

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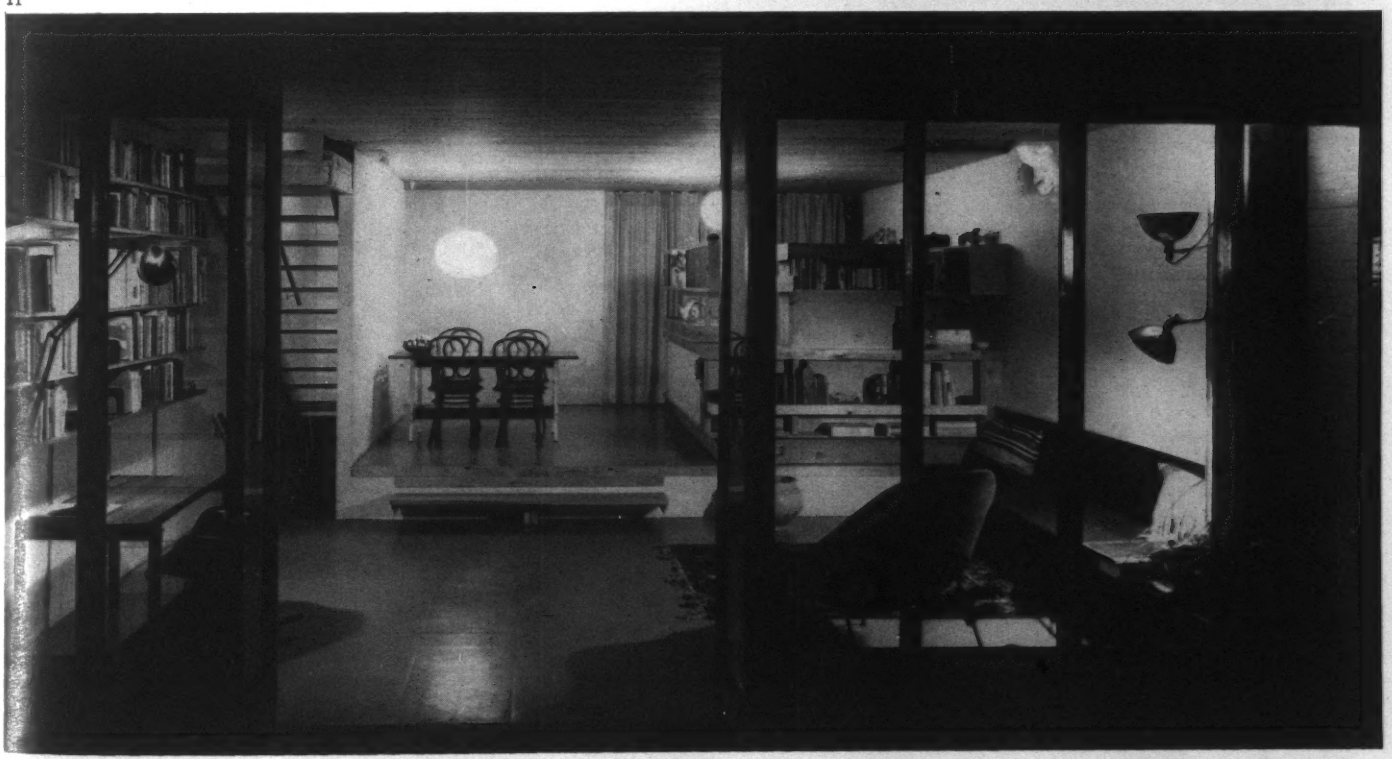
8, the stairwell. The need to accommodate the difference between the width of the stairs and the module of the external glazing created the opportunity for an unusual internal window to the children's room.

9, the kitchen from the sitting area.

10, view across the sitting area.

11, the main living floor from the bridge, at night.

11



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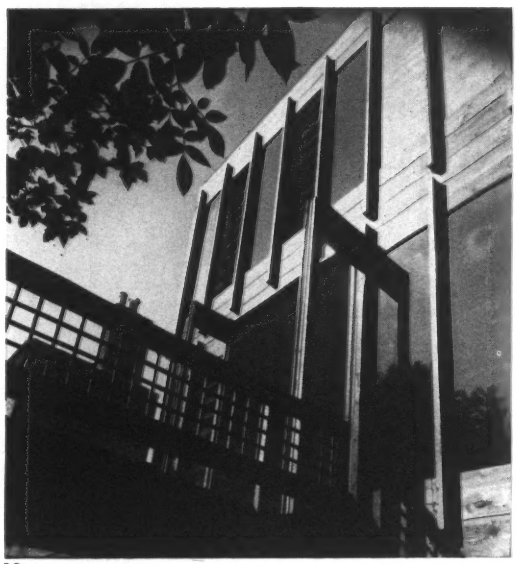

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12, *rear window-bays of the ground floor.*
13, *the rear façade and bridge from below.*

Architect's House, Hampstead Heath

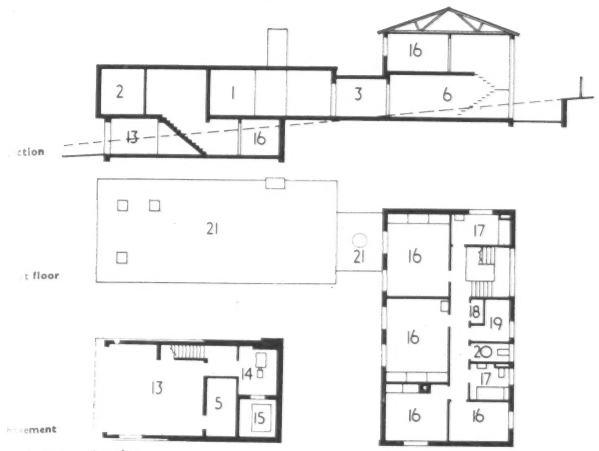
House in Hampstead

ARCHITECTS: JELLICOE, BALLANTYNE AND COLERIDGE
PARTNER-IN-CHARGE: F. G. COLERIDGE

The house is in West Heath Avenue and has been designed for two bachelor brothers with a resident housekeeper. In addition to the normal living accommodation they wanted a dark-room and a workshop; also a reasonable amount of wall-space on which to hang a collection of pictures, but not in a way that treated the house as a picture-gallery.

A steeply sloping site enabled a split-level plan to be used, with the garage and heating-chamber placed beneath

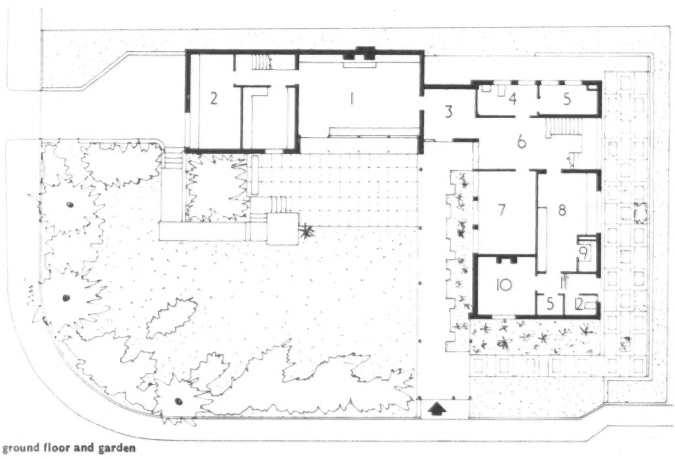
14



to plans and section

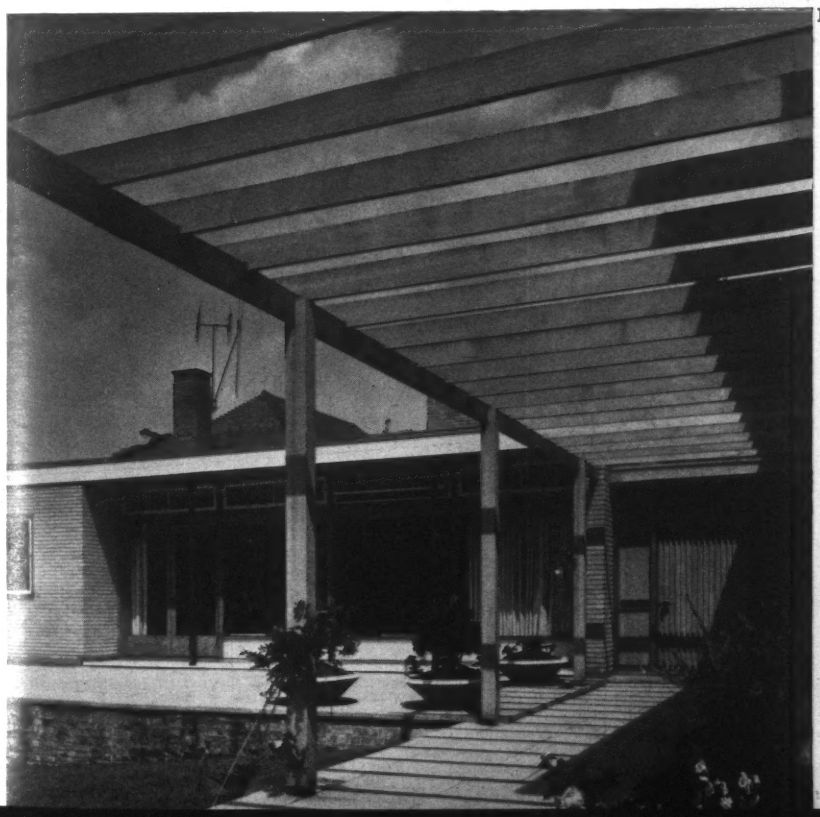
living room.
workshop.
entrance.
cloakroom.
stores.
stair hall.
dining room.
8. kitchen.
9. larder.
10. maid's room.
11. back entrance.
12. w.c.
13. garage.
14. boiler room.
15. fuel tank.
16. bedrooms.
17. bathrooms.
18. linen store.
19. boxroom.
20. w.c.
21. flat roof over lower wing.

40 20 0 10 feet



ground floor and garden

15



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14 (*opposite*) *the house from the garden side, living room and workshop wing on left.*
15, *looking down the main staircase to the sculpture by Zadkine.*
16, *the pergola outside the dining room window, looking toward the lower wing.*

the living-room and workshop wing, to which they have direct access by an internal stair. The L-shaped main floor plan with a linking entrance-hall provides different outlooks from the living-room (which opens on to a terrace overlooking the garden) and the dining-room.

Construction is mainly cavity brickwork, with a reinforced concrete first floor and reinforced concrete mullions to the living-room and dining-room windows. A soft clay subsoil necessitated short bored piles for the foundations. The facing bricks, which have raked-out horizontal joints, are of yellow colour and were imported from Holland. Teak is used for the staircase, window-frames and pergola. Floors are either teak, oak or mahogany. Staircase handrails and brackets are stainless steel. The entrance hall is panelled in satinwood. Heating is from radiators served by an oil-fired boiler.

17

18

House in Hampstead

19

17, *the back entrance, with slatted stair-hall window.*
18, *statue by Marini in pool on living room terrace.*
19, *floor-scaping and planting of back entrance yard.*

EXHIBITIONS

PAINTING

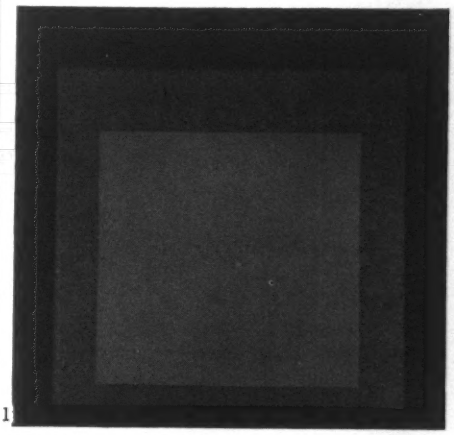
Gimpel fils recently organized an exhibition of paintings by Josef Albers, one of the great schoolmasters of the modern movement. A useful catalogue was issued for the occasion and included statements by the artist and tributes from Grohmann and Arp. Simon Nicholson's excruciatingly arty lay-out made every article and list look like the free verse of a long forgotten avant garde, but it may have been an example of 'absolute' typography, in which case it may also have been an act of homage, for Albers has been one of the VIPs of 'absolute' painting for over thirty years.

He studied at the Bauhaus in Weimer, became a Bauhaus master when it transferred to Dessau and since 1933 has been teaching in America, first at Black Mountain College and for the last eleven years at Yale. Grohmann says that his basic design class at Dessau was the one that had the most students and the greatest influence. In America his influence has been even more striking. He is one of the backroom boys who taught young Americans to value a clean, uncomplicated application of paint to canvas.

His paintings at Gimpel fils looked like very handsome charts for a course in paint application and colour interaction, but they arrived here too late to be a revelation to young English painters: the painters they might have helped have learnt how to do this kind of thing from some of the Americans who have already benefited, and who do it with rather more zip than Albers.

Albers teaches and practises an extreme purity and simplicity of means. He works on a prepared ground of the 'whitest white' and applies his colour directly from the tube, spreading it as thinly and evenly as possible. He applies only one coat of colour and there are no other additions. The cleanliness and brightness of the result seems to support his claim that 'such homogeneous thin and primary films will dry evenly to a healthy, durable paint surface of increasing luminosity.'

These healthy paint surfaces are also demonstrations of 'colour autonomy,' and the colour areas are governed by a basic design of concentric squares, 1, which is used so persistently that the rare deviation – in two pictures a couple of symmetrical right-angled let-ins break up a couple of squares, and in another, two squares are joined together by diagonal lines—looked



1

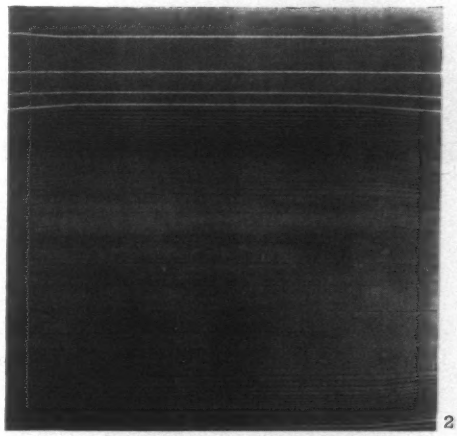
positively confused and hysterical, as if for one mad moment he were harbouring dreams of escape.

The ones in which he exploits variations of a single colour seem more active than the others, and in an all-yellow picture called 'Sounding' the huge stare of colour is suddenly larger than the picture. It takes one by surprise, like the unexpected opening of a furnace door. In one of his statements, he refers to 'the exciting discrepancy between physical fact and psychic effect of colour,' and his yellow painting communicated the excitement.

Like Albers, most of the painters in the English 'situation' group, which had the privilege of holding its second exhibition at the New London Gallery, are probably anxious to exploit this 'exciting discrepancy,' and if they've not yet managed to do so it's no doubt because they're concentrating for the moment on the problem of identity. Apart from Henry Mundy and Gillian Ayres, who were included in the show but are not part of the 'situation,' each of these painters seems to be concerned with establishing for himself a more or less repeatable basic design which the public will recognize as a unique characteristic of his work. This is understandable enough. It's a direct consequence of ICA investigations into the artist's 'situation' in modern society. They've accepted the notion that there's no fundamental difference between 'fine' and 'pop' art, have listened eagerly to talks about ergonomics, motivation research, build-up techniques and brand images, and are now engaged in styling their work for a prestige market. (Architects please note.)

The atmosphere of their first exhibition was somewhat different. For one thing the pictures were then somewhat larger, and Roger Coleman explained that the artists were adherents of a new conception of space in which the illusion of recession was replaced by an enlargement of the picture's actual dimensions to the point at which it temporarily constituted the spectator's total environment. They didn't manage to make these pictures interesting enough to persuade people that it would be a good thing to be enveloped by them, and now seem to have dropped Coleman as their 'front' man. The organization of their second show was put into the efficient hands of Lawrence Alloway, leading spirit of the ICA investigations mentioned above, and David Gibbs, European representative of the Jackson Pollock Foundation.

Each of the painters succeeded in inventing a distinctive basic design and a set of colour relations to go with it, and so, within the context of the exhibition managed to convey the impression that they had 'found themselves'—always a useful thing in an 'investment' market. The three works from the exhibition reproduced here—John Hoyland's design of bent grey lines on an all-over reddish brown, 2, Robert Law's large pale blue 'shape' and pea-green signs on white, 3,



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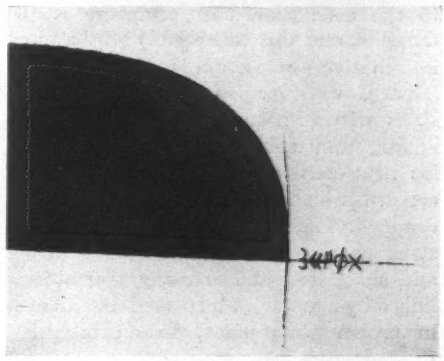
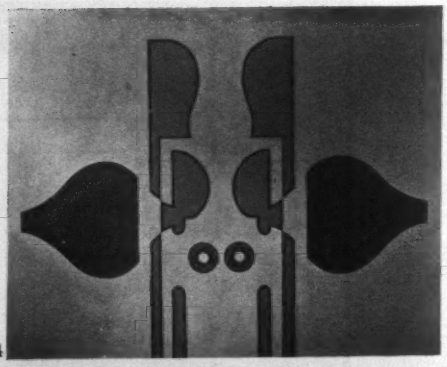


3

and Bernard Cohen's pale blue and moss green pieces arranged on a light green ground like a do-it-yourself *art nouveau* set, 4, have been picked at random, to indicate the success with which they avoid each other's territory. There was a noticeable rise in the general standard of paint application, and the show as a whole was very tasteful. But the exhibitors are operating



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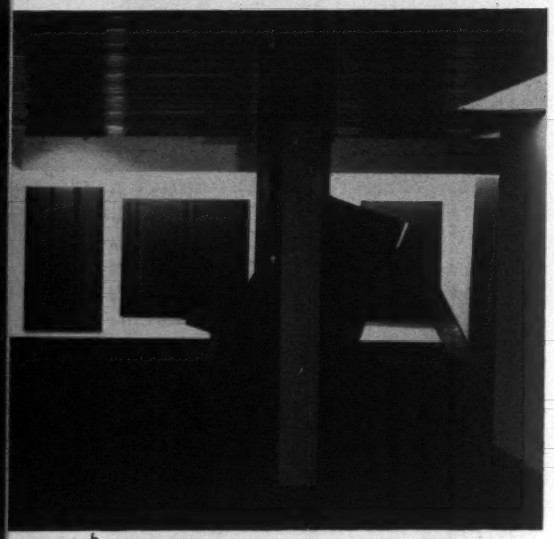


5

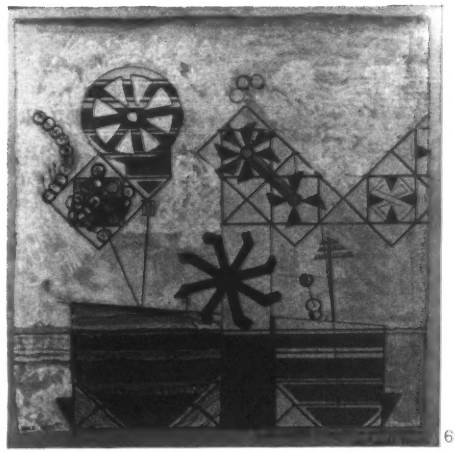
far below the level of compulsion and vitality at which a memorable image might be expected to occur.

A photograph of part of the New London Gallery is reproduced here, 5, because it affords a glimpse of the only piece of sculpture included in the 'situation' show. Part of it can be seen lurking behind the pillar; the rest of it extends into an alcove. The artist, Anthony Caro, has come to the conclusion that sculpture is too tangible, and this is probably why a more informative photograph is not available.

Caro, who carried off an important Paris prize with one of his bronzes of pot-bellied women, is now trying to apply to his new constructions the environmental concept which his fellow exhibitors have dropped. The example on view was constructed of large pieces of scrap girder and sheet iron and is really two objects linked by a metal lead. It is covered all over in brown gloss paint. In an interview printed in a new four-page *avant garde* periodical called 'Gazette,' he says that he made it indoors in a restricted space so that he couldn't stand back and make compositional decisions. Since his 'decisions don't bear on the thing's all round appearance,' he doesn't want us to see it all at once. At the New London Gallery, one couldn't avoid seeing it all at once, although it wasn't right out in the open. The only way in which he might have prevented us from observing that the absence of compositional decisions had resulted in something wretchedly ugly and forlorn would have been to add two more trailers and put a bend in it so that one end of it could have disappeared into the private office. As it is, he seems to me to have started something that he can't finish. It's so dependent upon a setting in which it isn't properly visible and in which it might acquire scandal value, that it looked more pathetic in the gallery than a tortoise without its shell. It would have to be dumped in the middle of a small eighteenth-century drawing room before it could have a chance of becoming what he intends it to be—an irrational, overbearing confrontation.

In sharp contrast to Josef Albers, Max Ernst uses extremely impure and complicated technical devices to achieve again and again pictures which are pure magic. There was such a plethora of memorable images in his retrospective at the Tate Gallery that I can only try to say something about one of the many thematic threads that weave their way like serpents through the jungle of his haunted and haunting imagination.

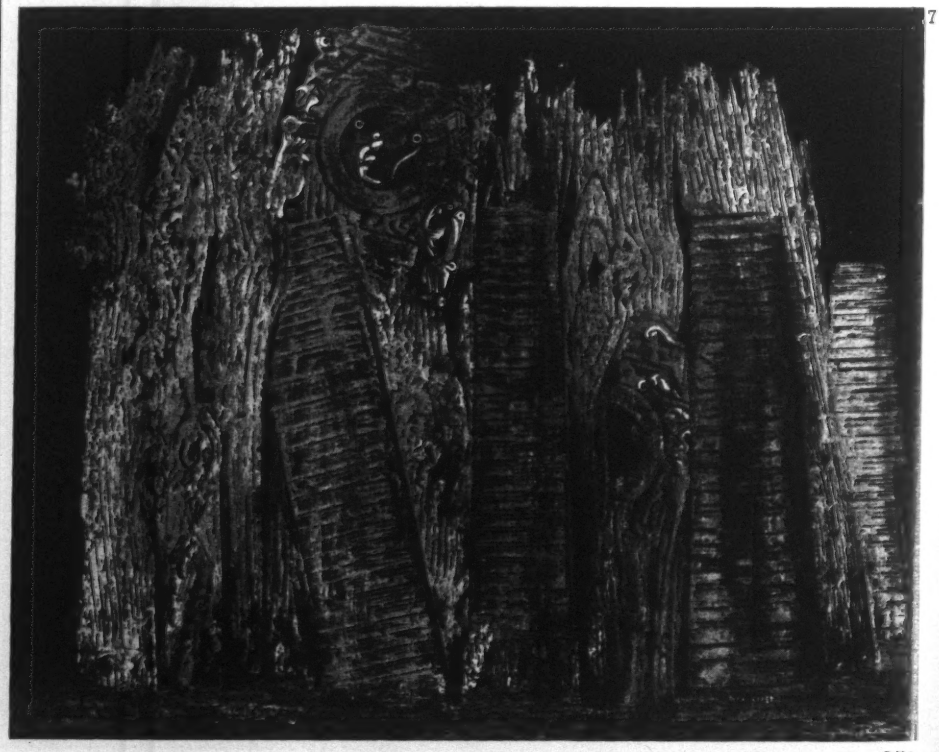
The one which I find the most haunting of all is the landscape theme, which he handles in a way so strange and perverse and yet compulsive that one of the many titles by which he deserves to be known is 'master of the landscape of sexual enticement.' It began to emerge at the start of his career, on pieces of wallpaper altered and transformed by gouache and pencil.



6

The title of the one reproduced, 'Glacial landscapes icicles and rocks like feminine bodies,' 6, provides identities for the signs to be found there, but does not refer to the signalling activity of the 'standing' signs which, once it has been noticed, gives one the peculiar impression that one's been observed by the picture and that it's giving one an ambiguous but somehow feminine welcome.

Perhaps the most important of his automatic procedures was 'frottage,' which was first used to take pencil rubbings from various textured surfaces. They led to a beautiful series of drawings, known as L'Histoire Naturelle, which might almost be described as meticulous studies of nature specimens collected in a land that doesn't exist. The subsequent application of the process to oil painting yielded some of his finest works, including a series of



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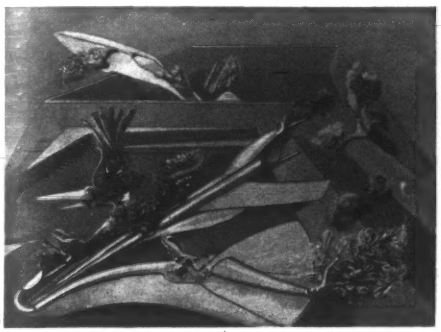
forests, well represented in his retrospective, which are among the most poetic evocations of the terrors and enchantments of the forest in the history of painting. They derive, appropriately enough, from impressions of various wood grains, and the element of interpretation, considered as an end activity, is astonishingly small. The one called 'Vision provoked by the Nocturnal Aspect of the Porte St. Denis,' 7, comes fairly late in the series and the title is an indication of the visionary complexity which the theme gathers as it proceeds. Things in the exterior world begin to take on the appearance of his pictures and unfold a kind of myth: the narcissistic element in man demands the destruction of the object, and the object is reconstructed as an image of desire.

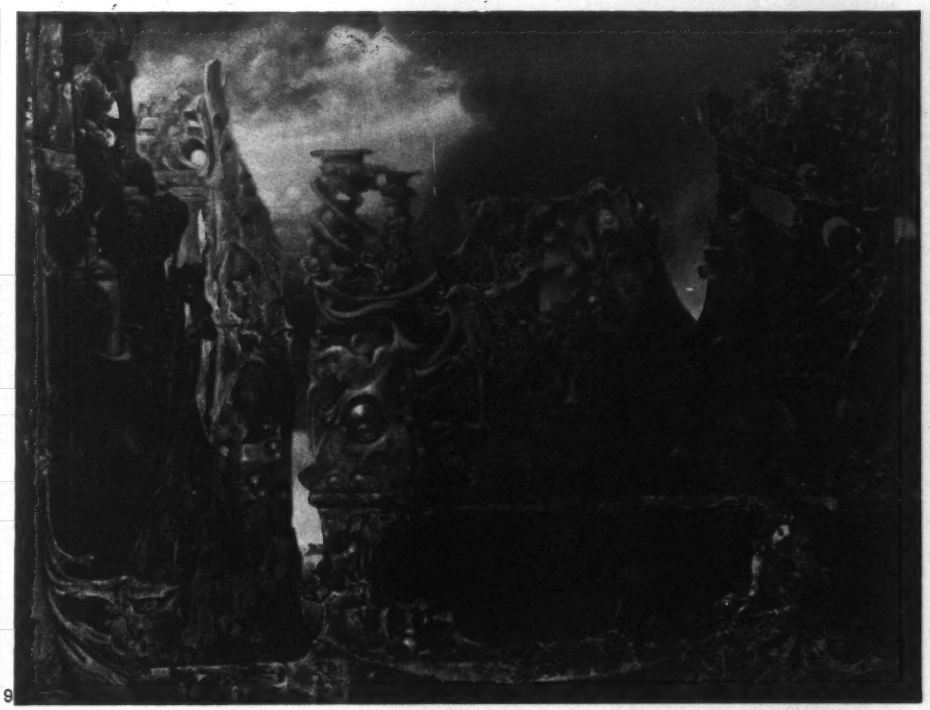
The painting called 'Garden Aeroplane Trap,' 8, one of the earliest examples of a series, is achieved by a mingling of



8

different approaches. In the autobiographical essay printed in the Arts Council's catalogue, Ernst describes the series as 'voracious gardens in turn devoured by a vegetation which springs from the debris of trapped aeroplanes.' But this is not a good description of the present picture. For one thing, the forms bear only a remote and suggestive resemblance to aeroplane parts, and it seems probable that they began to look more like fragments of aeroplanes in later works because they were influenced by the title given to earlier examples. I have the impression that the first picture in this series started as a free improvisation based on the curious coffin-like forms in early Chiricos and that this coffin form brought up associations with necrophilia which Ernst dealt with, so to speak, from a distance. The coarse plant form with a thick stem spread out like a letter 'V' is a substitute for a reclining figure and the intricate fuzzes of automatic texture like intestinal creeper are substitutes for scattered clothing, so that in relation to the image, the title carries the implication of sexual magnetism.

The 'Garden Aeroplane Trap' is a picture which has been subjected to interpretation at every step but in the picture entitled 'The Eye of Silence,' 9, the control



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of automatic procedures has become so adept that it is impossible to attempt an estimate of the ratio of chance to choice. This picture is not made by the frottage process, but by the process known as decalcomania, discovered by the surrealist painter Oscar Dominguez, but only fully developed by Ernst. It gathers its title from the eye-like coloured stones set in the rocks, and the whole fearsome landscape is now almost literally watching us. It is a temptation, but there's no St. Anthony because the spectator replaces him.

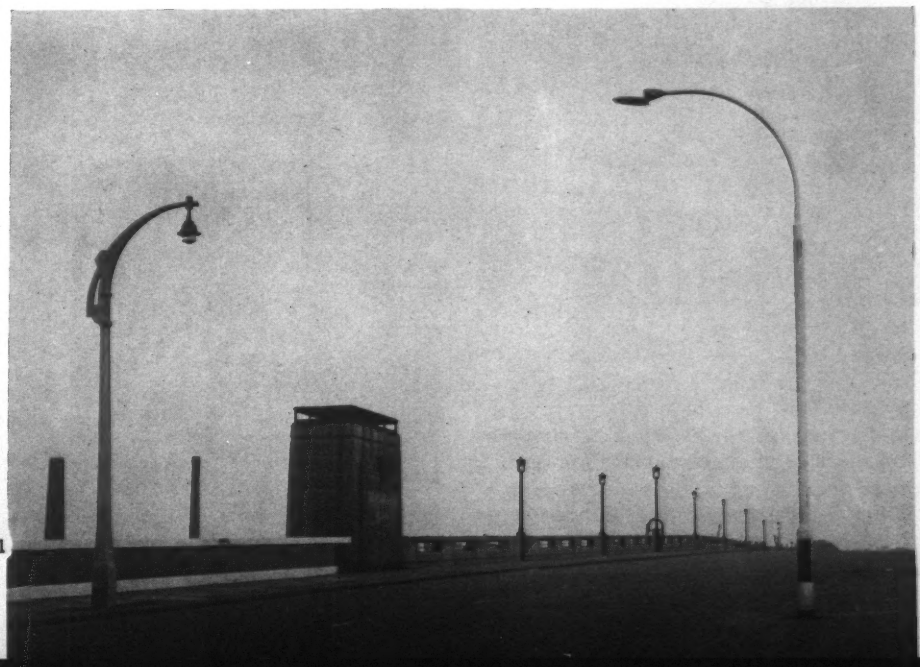
Robert Melville

CREDIT

NEW LAMP-POSTS FOR OLD

When the REVIEW *publishes a picture of two lamp-posts side-by-side, it is usually to praise the old and damn the new, but at Wandsworth Bridge,* 1, *the situation is reversed,* and the Fulham Borough Engineer's Department is to be congratulated on a substitution that is welcome in itself, and as a symbolic gesture that shows that the inadequacy of the dying-swan type of lamp standard (a national eyesore ever since the war) is now beginning to be recognized.

But not only are the new standards an intrinsically better design, they are also here much more sympathetic to the *genius loci.* A sudden confrontation with the dome



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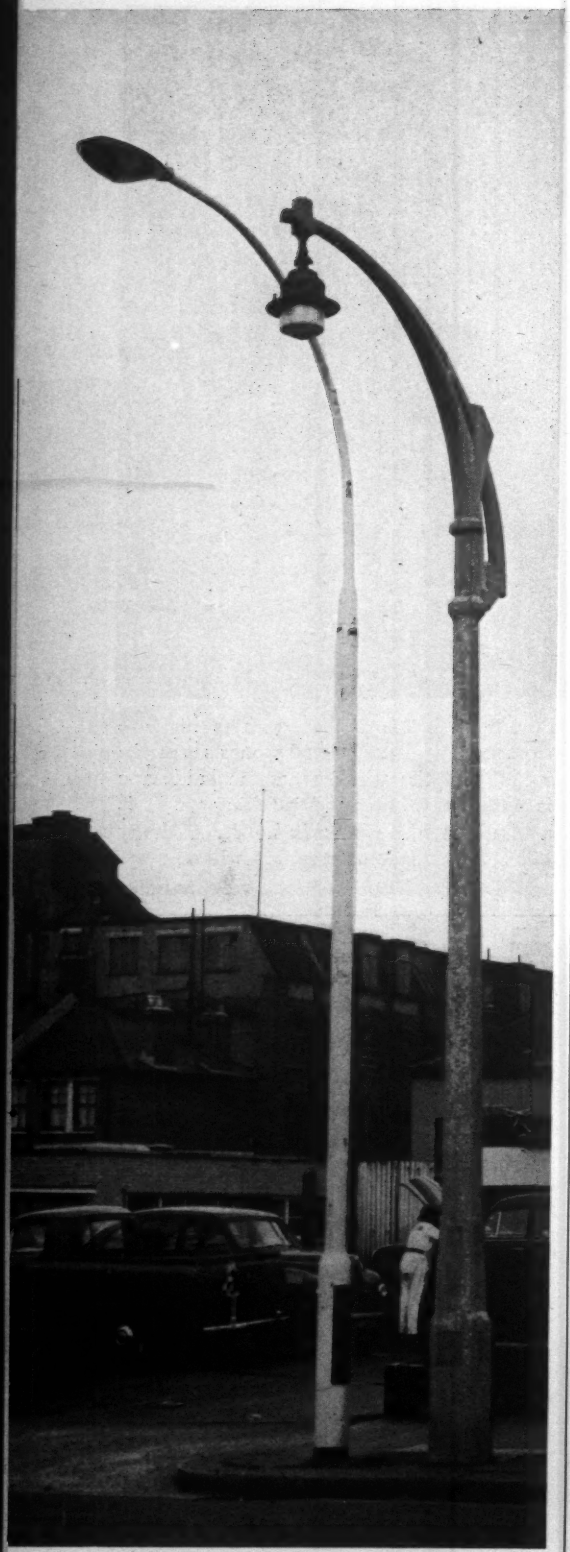


2 of the heavens is one of the strongest visual impressions received on emerging on to such a bridge from a closely built-up area, a vertical and panoramic experience at the same time, and the slender new standards trace a lighter arabesque on the sky, 2, than does the gross, jazz-modern neck of the older type, while the thinner column fences out less of the horizontal panorama.

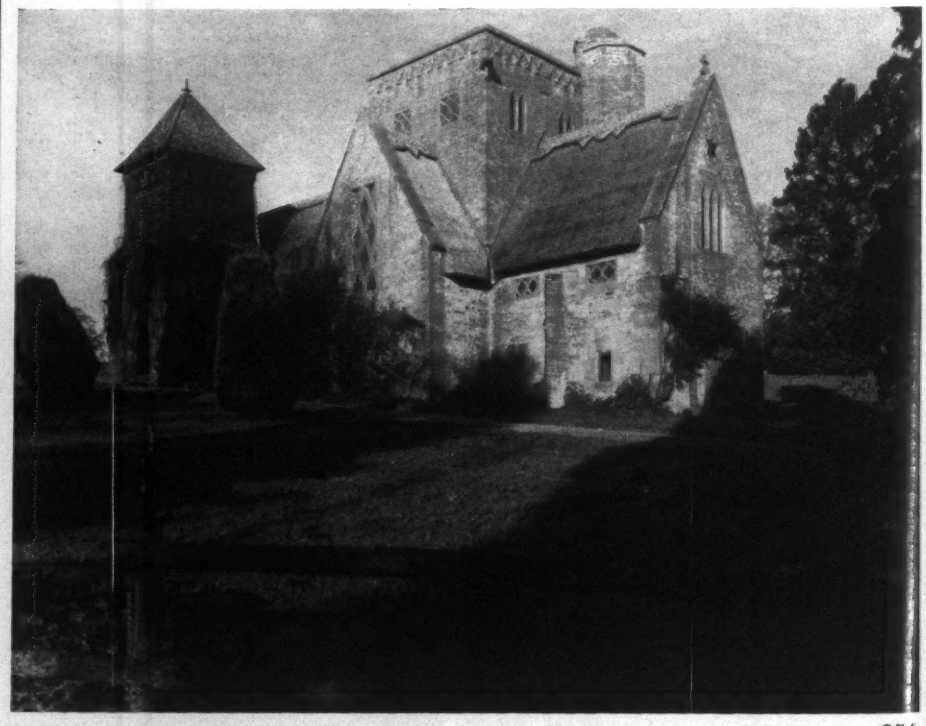
HISTORY

LETHABY'S LAST

Lethaby needs no introduction. His development from the Arts and Crafts to the DIA, his principalship of the Central School of Arts and Crafts, his surveyorship of Westminster Abbey, his learned books on the Abbey and, earlier on St. Sophia are well-enough known. His *Form in Civilization* was reprinted only four years ago (1957). His definition of art as 'the well-doing of what needs doing,' dates from 1896. In 1907 he wrote to Sydney Cockerell that if he were to start again he would 'eschew taste and design and all that stuff, and learn engineering and hard building experience. Hardness, facts, experiments—that should be architecture, not taste.' And in 1912 he pleaded that 'a new science of building morphology was needed, a new type of classification by essential differences of structure,' and that 'great building types should be investigated as structural problems.' There are plenty more quotogenic sayings, for instance the wise and resigned 'Ye olde modernist style—we must have a style to copy.'

But with all that respect for Lethaby the teacher, his most impressive work of architecture has never been properly photographed or published. It was also his last. It is the church at Brockhampton in Herefordshire, designed in 1900 and completed in 1902. It was built on behalf of Alice Madeline Foster, of Brockhampton Court, wife of Arthur Foster, lord of the manor, in commemoration of her parents, Eben D. and Julia M. Jordan. Eben Dyer Jordan was the son of a farmer, opened a dry-goods store in Boston at the age of nineteen, sold 8,000 dollars-worth in the first year, 100,000 in the fifth. The firm, later called Jordan, Marsh and Co., has now the largest department-store in New England. Eben Jordan died in 1895. Madeline met Arthur Foster on a cruise. He came from a Halifax mill-owning family. The Jordans built them Brockhampton Court as a wedding present. He died about 1932. It is not known how she came to approach Lethaby.

Externally the general impression of Brockhampton church, 1, is that of a traditional Herefordshire church with a south-porch tower. The crossing tower in addition was not a usual motif, but there are crossing towers in Herefordshire, for instance at Bromyard. The stone is local, the thatching local too. Lethaby clearly wanted to be rough and rustic—see the weatherboarded tower, the rubble of the buttresses, the random top of the stair-turret and the chunky water-spout of the crossing tower. But while at first sight the tourist might accept the church as Gothic, the details are surprisingly original, especially the diaper-grid of the south transept window—did Lethaby know the one mediaeval precedent, the east window of Barsham in Suffolk?—the triangle-heads of the lights of the east window, the lozenge and ogee tracery of the windows of the crossing tower and so on. The only comparable church in Europe in these externals is Baudot's St. Jean-de-Montmartre, and



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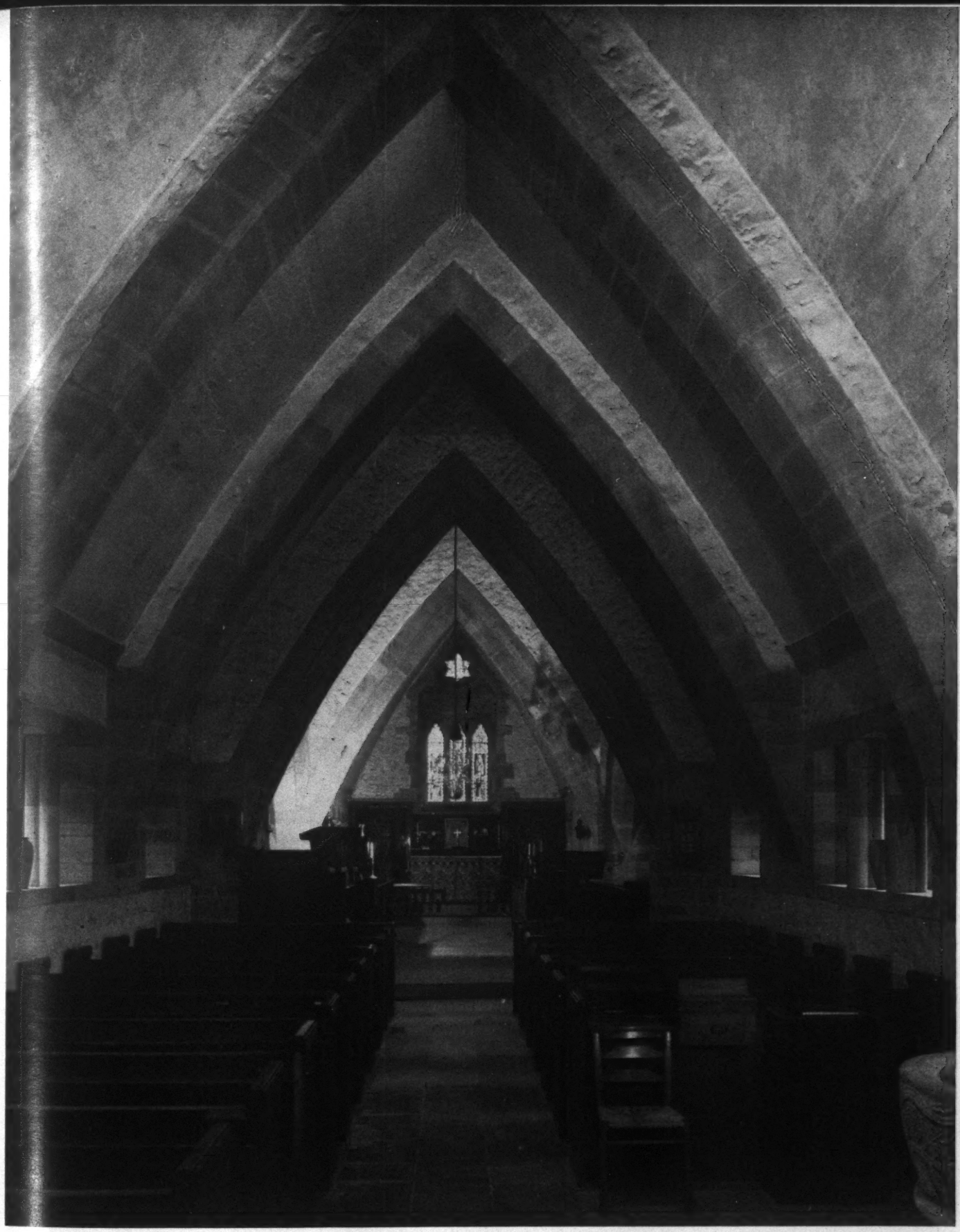

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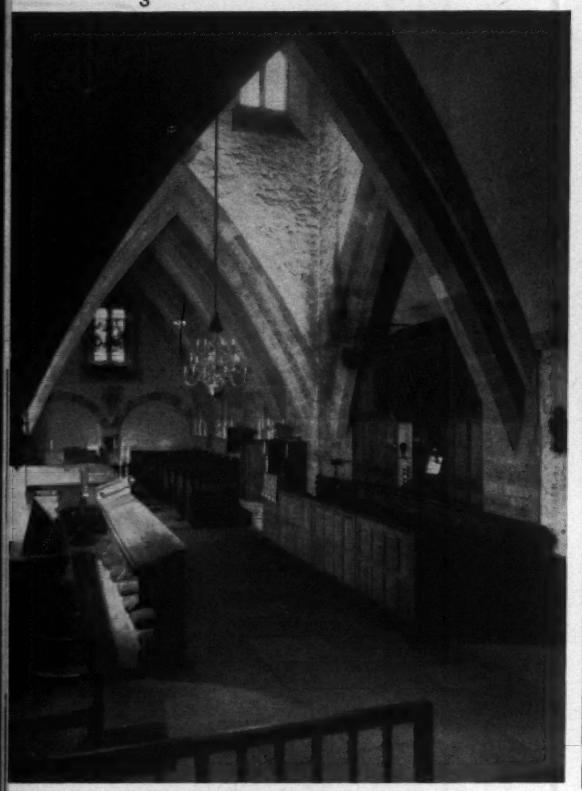
that was still under construction in 1900.

But the great impact is the interior, 2 and 3, with low walls, and steep, strong, closely-set, single chamfered arches rising straight out of the walls. The tunnel-vault they support Lethaby made of slabs of concrete.

Lethaby was articled to Alexander Lauder, of Barnstaple, and joined Norman Shaw in 1877, became his senior assistant, and stayed for twelve years. He left with the job to design Avon Tyrell in his pocket, a job offered to Shaw and by him passed on to Lethaby. Shaw was a generous man. He is supposed to have said: 'It is I who am



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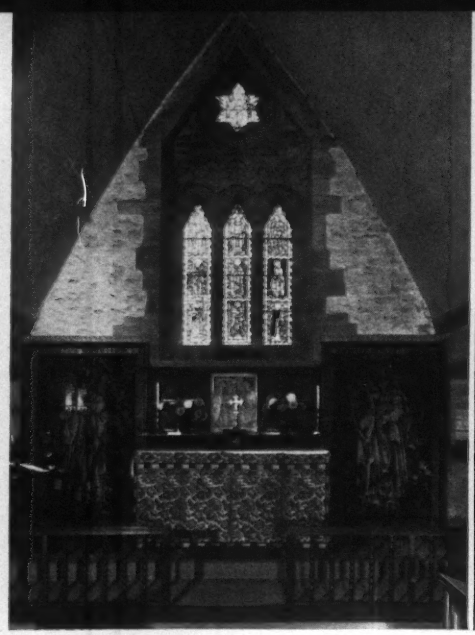

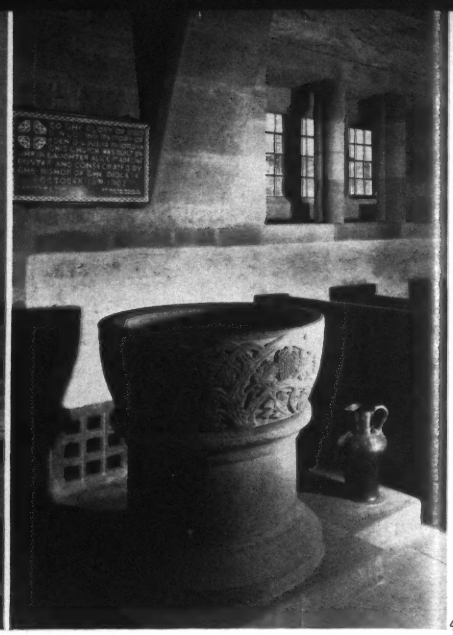

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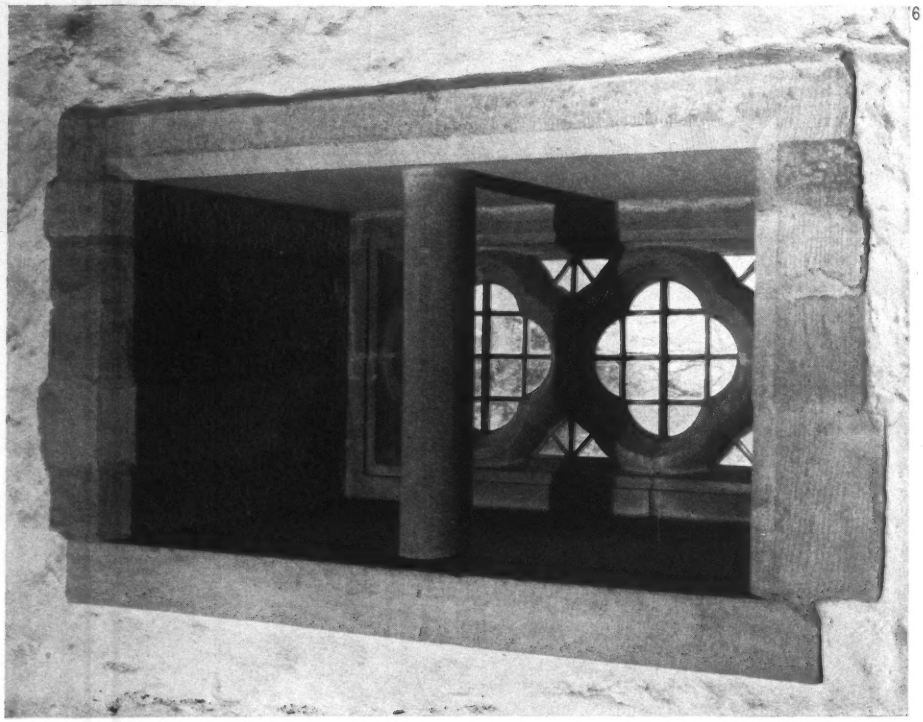

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Lethaby's pupil.' Lethaby was an inspired draughtsman, and he detailed such buildings of Shaw's as Dawpool and the church in Latimer Road. Shaw had been made aware of concrete by the commission which W. H. Lascelles gave him to design concrete houses on the Lascelles patent.

The Builder was rightly critical of the result. Shaw had given the slabs an appearance of tiling, i.e. missed 'the chance for doing something new with a new material and method' (*The Builder*, XXXVI, 1878, p. 909). Later, however, Shaw wrote to Lethaby: 'Reinforced concrete should do a lot for us' and Lethaby praised 'armoured concrete' at the end of his *Architecture*, the book which came out in the Home University Library in 1912. But the slabs in Brockhampton Church are not reinforced. Their use was probably suggested by the wish to have a safe and lasting ground-work for the thatched roof. So in this technological respect Baudot's all-concrete church scores over Lethaby's.

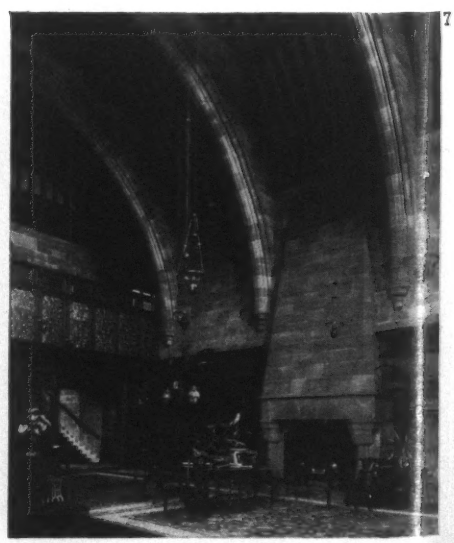
Lethaby worried a great deal over the building. He had decided to have it done by direct labour. Randall Wells was the clerk of works, the same who later worked on E. S. Prior's church at Roker, so patently inspired by Brockhampton, and in 1937–39 designed the entirely non-period church of St. Wilfred off Halton Hill, Leeds.

To the left and right of the altar, 4, are Morris tapestries. The two ample angels were designed for stained glass at Salisbury Cathedral between 1875 and 1880 and woven as tapestries various times

Right: Norman Shaw's church at Adcote, compared in this article with Lethaby's at Brockhampton (above.)

(e.g. Eton College Chapel). The font, 5, is in a free Byzantine style, familiar to Lethaby from his work at Constantinople. His book on St. Sophia came out in 1894. In the same year Bentley went in for the competition for Westminster Cathedral, and even before then Sydney Barnsley, Lethaby's friend, had built the church of Lower Kingswood in Surrey in the Byzantine style (with original Byzantine pieces inside). But the font is only a detail. Another notable detail is the double quatrefoil window, 6, with its absolute geometrical simplicity.

What might have inspired Lethaby to the mighty arches and their continuous mouldings, unbroken by capitals or abaci? The answer is not easy. The tunnel-vaulted secular buildings of Catalonia with their



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transverse arches (Barcelona: Tinell and Arazanas) and the strikingly similar monastic halls of Southern France (Senanque, Le Thoronet, Aiguebelle) he can hardly have known. The Hall in Norman Shaw's Adcote of 1879, 7, is a more likely source, though the arches are round, and one might also feel reminded of the crossing arches of Shaw's church at Leek of 1880, 8. But neither can have provided more than stimulus and encouragement. Essentially, for all *I* know, Brockhampton is original.

N. Pevsner

NOTE: *My thanks are due to John Brandon Jones, who knows more about Lethaby than anyone else, to Ronald Briggs, for information on the Morris angels, and to Mrs. Sarah W. Flannery, of the Boston Library, for information on Eben D. Jordan. The photographs, except the last two, were taken by Eric de Maré.*

PLANTS

WEEDS: 2, PERIPATETIC PLANTS

The landscape architect is naturally concerned with establishing the basic pattern of a planting scheme in terms of trees, imperishable shrubs, structural hedging, paved and grassed areas. He often fails to introduce the subsidiary but important unpredictable element which from month to month provides flashes of interest for New Town denizens, factory hands or institution inmates. (There are of course exceptions, viz. Powell and Moya's sensitive and imaginative planting at Swindon hospital).

This is a plea for introducing more peripatetic plants on new sites, plants which march of their own accord or set up majestic colonies by naturalizing. Mostly annual or biennial, anti the fixed plan, after the initial planting they resow themselves in situ or start to wander.

Forget-me-nots recur in my neglected garden in April-May, an annually forgotten element, producing a blue haze which underpins the white narcissi, pear blossom, quince, white sweetbriar. *Myositis palustris* (*syn. scorpioides*) grows like a weed, dies off, seeds, is pulled up and thrown on the compost heap. Borage, same family, performs a similar self-sown service later in the summer, as do opium poppies.

The itinerant weeds which architects might favour are those with stately form to offset the ordinariness of many shrubs when not in flower. Foxgloves for instance. Large-flowered strains of the common foxglove *Digitalis purpurea*, 1, have been developed, some of them white and yellow, though these do not necessarily reproduce white or yellow flowering seedlings. Often they revert to pink, red, spotted-throated purple. No matter. Foxgloves thrive in shade, seem to require a minimum of soil, sow themselves for instance in cracked paving. Flowers in June, July; the pointed-leaved tussocks start up in March. Plant or sow in groups to redeem the rhododendrons, or punctuate sad shrubs. Sutton has the seed.

I am strongly in favour of establishing self-perpetuating colonies of stately single hollyhocks, strains of *Althæa rosea*, 2. Thompson & Morgan, Ipswich, offer a wide variety of seed, though these don't necessarily re-seed themselves true to parent form. Specialists used to insist that they need a rich loam, potions of liquid manure and four-foot staking. This is because hollyhocks once were 'florists' flowers' and

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subjects for careful propagation. Treated as monumental weeds they select odd spots like gravel paths, one forgets to stake them some do, of course, lie down in storms. The crowns are susceptible to rotting from damp in winter. Their flower stems should not be severed too close to the soil after flowering. They are more or less perennial but one gets better flower spikes from young plants. As they are prolific self-seeders the ageing plants can be rooted out. Part of their interest is the colour hazard. One year they may produce a range of strange coffee bistre tones, another may see white, lemon and rust red. Bees and bumbles are responsible for this cross-fertilized colour variability. Self-seeded plants are, however, less liable to the bugbear rust.

A more predictable infiltrator as far as colour goes is the evening primrose, biennial, with mostly yellow and some white prolific flowers. The tall kinds are free seeders, varieties of *Oenothera biennis* such as large-flowered *Lamarckiana*,3. These thrive in poor soil, even in pure sand, and grow to 5 and 6 feet. Flowers July and onwards. Drawbacks: need dead-heading and somewhat straggly form. This last is minimized if adequately grouped.

The best weed I boast at present is the mullein,4. The native forms are *Verbascum nigrum*, a relative 3-foot dwarf, and *V. thapsus* (Aaron's rod) common on the chalk like the related mallows. The rest of the enormous family spring from Europe, North Africa, Siberia, the Caucasus. Their names alone, *olympicum*, *pyramidatum*, *phœniceum*, *giganteum*, *bombyciferum* proclaim nobility of form. Some of these mainly biennial plants make a splendid rosette of sage, grey or silvery velvet leaves in winter, in late spring develop their magnificent pyramidal forms, in June, July produce branched spikes of sulphur yellow flowers, 5. They are ideal for siting among medium-sized shrubs. There are various sterile hybrids with off-beat rust, dust and apricot colours, one of whose parents is usually the variable purple mullein, *V. phœniceum*. These doubtful perennials need more careful cultivation and reproduction from 2-inch root cuttings taken in early spring or autumn. They also need staking. 'Cotswold Gem,' 'Cotswold Beauty,' 'Cotswold Queen' (3-foot), 'Gainsborough' (sulphur) and 'Pink Domino' (4-foot) all sterile, set no seed. But one should go for the fine strong free-seeding species like *V. olympicum*, *V. Chaixii*, *V. phlomoides* for self-perpetuation. V. 'Harkness Hybrid' and V. 'Miss Willmott,' one rich yellow, the other creamy white, are free-seeding biennials standing 5-foot high. *V. nigrum album* grows to 3 foot, has dark centres to its white flowers, perennial.

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TOWNSCAPE

VARIETY IN IDENTITY

The saving grace of spec-builder's housing is variety. Where there is none, spec-building becomes unbearable, whether of 1870 and Gothic, of 1930 and Voyseyish or of to-day—for the simple reason that uniformity must be well built and well detailed to satisfy. How easily the maximum of variety can be achieved without the slightest change of plan is demonstrated by the sequence of eleven adjoining pairs of houses in Golders Green Road, London, illustrated herewith.

With remarkable ingenuity they ring the changes on almost every wall-treatment and facing material—to say nothing of shape and style of window and gable—known to the domestic builder. 1, Brick below and rough-cast or stucco above. 2, the same, but gables introduced above the bay-windows. 3, a more high-waisted brick and rough-cast treatment, and back to the sloping roof. 4, gables again, but without the windows set into them. 5, all brick this time, except for rough-cast on the bays; no gables. 6, rough-cast in the centre too, and the gables—with windows—are back but in brick. 7, something quite new: barge-boarded gable, tile-hung; projecting half-timbered upper storey with corner columns; rough-cast below. 8, back to the bay-window, but with brick-striped walling either side; one gable plain stucco, the other half-timbered. 9, the most complicated of them all: a half-timbered upper storey again, but projecting on brackets at cill level with tile-hanging below, and a queer half-hip, half-gable. 10, more sober, with brick and tile-hanging and stuccoed timbered gables. 11, stucco all over, but the gable wall set back in shadow behind the barge-boards.

A second look at this bewildering variety of treatment is needed to reassure oneself that the basic design does in fact remain quite unchanged. And the desire to be different is no less today than it was when the houses were built, judging by the variety of colours that occur.

SKILL

INTERNAL FINISHES

The change in emphasis from heavy to light construction in the post-war years has brought with it a corresponding change in internal finishes. Some of these must be classed as 'new,' but most represent rather a modification of a traditional finish. In this article John Winter gathers the main variants together and discusses their technical background, their uses and effects.

Most structural materials are cold and liable to pick up dirt; most insulating materials are soft and easily damaged: so the inside face of a building needs protection. It needs a wearing surface.

The wearing surface must be able to cope with dirt as well as wear and tear; it must be either resistant to these (tiles, marble), or continually renewable (paint, wallpaper) and between these two extremes an increasing number of materials are on the market.

Plaster

Plaster is the traditional and still the most common wall finish; its great advantages are its low cost (approximately 6s. per yard applied) and the ease with which it can be patched when damaged or when new service runs are cut. But its disadvantages are the tendency to crack and the slow drying out time, which means that finishes such as paint and wallpaper should not be applied for six months and new houses are invariably damp and humid. In an effort to overcome these disadvantages the 'Dry Lining' technique is being increasingly employed in this country. It has been successfully used for fifty years in the United States where the warping of wood studs presents serious cracking problems with plaster. The dry lining has a cavity behind, which increases the U value of the wall and may be filled with insulation; further, it acts as a low capacity lining which is an advantage in intermittently heated rooms. Dry lined walls are ready for decorating almost immediately: wallpaper, plastic sheeting, paint, tiles, any of the finishes associated with traditional plastering can also be applied to plasterboard. It is not so good for distemper as the shiny plaster joints contrast with the paper-face of the plasterboard. Feather-edged cover strips of the same paper as that covering the plasterboard have been used but this has not proved too successful, so lining paper should preferably be used. If the surface of the plasterboard is sealed before papering it can readily be stripped for redecoration.

There are various methods of fixing.

1. BRS method. The plasterboard is stuck to the wall with ribbons of plaster applied to the back of the plasterboard, 3. The BRS have also evolved special pouches which enable the joints between boards to be neatly filled by relatively unskilled workmen.

2. Plaster dot system, 1. Pieces of millboard 3 in. by 2 in. are stuck to the wall with plaster, eight pieces to a 3 ft. by 8 ft. area corresponding in position to the corners and halfway along the sides of the sheet of plasterboard to be fixed to the wall. The faces of the millboard dots are brought to a true plane. (They thus perform the function of a floating coat in normal plasterwork.) When these have set, plaster dabs are applied to the wall between the dots and the sheet of plasterboard pressed home and nailed through the dots. Round-edged plasterboard is used with $\frac{1}{8}$ in. joints filled with plaster and smoothed off. The overall thickness is $\frac{5}{8}$ in.

3. Plasterboard screed system. Similar to 2 above but 3 in. wide plasterboard strips are stuck to the wall as screeds; they are levelled and the plasterboard sheet is nailed to the wall through the screeds. Overall thickness is $1\frac{1}{8}$ in.

4. Timber batten system. Where the wall is damp, liable to efflorescence, or has been previously decorated, pressure impregnated timber battens can be nailed direct to the wall and plasterboard nailed to the battens.

5. Direct nailing system. Where the wall is of blocks which permit direct nailing, plasterboard can be nailed direct to a fair face wall.

Dry lining does not have a high reputation among architects, possibly because its widest application is by speculative builders who often apply richly textured surfaces to hide bad jointing. If the system is considered on its own merits and not as a substitute for wet plastering, it should be possible to produce very neat details, eliminating architraves and cover strips, etc., 2. The cost varies between 7s. and 9s. 6d. per yard depending on the system employed. This is considerably more than traditional wet plastering.

Tiles

Ceramic tiles are a traditional finish in rooms where an impervious finish is required. It is claimed that modern methods of manufacture reduce the risk of crazing which has been a common cause of failure in old tiles. The present tendency is towards fixing tiles with adhesive and this should lead to a more even surface. The bituminous nature of the adhesive gives a further waterproof layer which is an advantage so long as the backing is absolutely dry before application; when the adhesive is dry the joints are grouted with cement in the same way as tiles on a cement sand bedding. No grouting has yet been evolved to go with the bituminous adhesive; this would seem a likely next step in development as cracking at the joint is a frequent cause of failure in tiling. In order to minimize cracking at the joint due to slight movement of the tile or its backing, the joints should not be less than $\frac{1}{16}$ in. wide. Spacer lug tiles are now available which have $\frac{3}{32}$ in. lugs which automatically produce even joints. The lugs are made so thin that they crush under pressure of movement so that the joint takes the movement and not the tile.

Plastic

There is a wide range of patent plastic wall finishes but all have certain features in common. They are impervious to water and so cannot be applied to a backing which still has to dry out. If, for example, a new concrete wall was sprayed on both sides with plastic, it would cause the coating to blister, but the vapourproof nature is an advantage where insulation is faced with plastic, as most insulation materials are only efficient when dry. A disadvantage with plastic finishes is that they collect static charges when rubbed and this means that they attract dust. This problem is worse with the denser plastics, but the manufacturers of some flecked sprays claim that the last layer of flecks disperse the charge, otherwise anti-static wax may have to be used periodically.

The main alternatives under this head are as follows:

1. Plastics sheets. Apart from plastic laminates which can be glued on site, numerous other materials can be supplied with a plastic face. Plasterboard and plasterboard partitions are available with p.v.c. facing, but for economical production the p.v.c. does not return round the edges of the board so that cover strips are needed. These produce re-entrant corners which catch dirt and, since the p.v.c. facing was probably chosen to provide a clean surface, the original object is defeated. A more expensive plasterboard is made with the p.v.c. returning round the edges allowing flush or recessed joints. By this means door jambs, etc., can be neatly detailed without architraves.

Plastic is also manufactured in rolls which can be applied in the same way as butt jointed wallpaper and some brands are sold with adhesive on the back ready for application. Its use is widespread in the United States where vinyl coverings have for some time been used in institutions and service areas where durability is important; and these are now being

[continued on page 362

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SKILL

continued from page 360]

styled for the 'House Beautiful' market. Designs may simulate wood, leather, marble, etc. Most are unsympathetic, but the possibilities are unlimited. Vinyl wall coverings have been available in this country for some years and have largely replaced Rexine, a nitro-cellulose material. Vinyl coverings are made from a woven cotton fabric with a compound of vinyl resin, pigment and a plasticizer electronically fused to one side of the fabric. Heavy textures should be avoided as they require constant washing. Most stains can be wiped off but asphalt, iodine, lipstick, mustard and ballpoint ink may give trouble. Vinyl is affected by alkali, so new lime plaster cannot be covered. A paper backed vinyl is also produced and can be obtained factory bonded to hardboard: it can then be applied to walls and ceilings as panels, but its properties are similar to the cotton back vinyl.

2. Plastic tiles. Vinyl asbestos wall tiles are made which can be glued to any smooth surface such as plaster or plywood and, because of their accurate manufacture and ability to deform slightly under pressure caused by movement, they do not have to have their joints filled. If joints are required for decorative reasons, the tiles can be fixed with open joints to be filled with a white cellulose based filling material. These tiles can stand a certain amount of water but are not completely waterproof and, unlike most other plastic finishes, would not be suitable for a shower cubicle. Vinyl asbestos tiles are available in different qualities, in sizes of 6 in. by 6 in., 4½ in. by 4½ in., and 12 in. by 6 in., and in plain colours, flecked or marbled. The application of these tiles requires little skill and is largely aimed at the 'Do it yourself' market. They can be bent when warmed for fixing to curved surfaces.

3. Plastic spray. A jointless waterproof finish can be sprayed on to most building materials in the form of a p.v.c. film about 30/1,000 in. thick, 4, 5, 6. This is a development of the 'moth balling' technique for preserving equipment at the end of the war which was developed for use in atomic energy plants where building surfaces and equipment are sprayed with film. This permits decontamination of radioactivity by stripping the film. Where hygiene is of a great importance p.v.c. sprayed film would seem to be the ideal material. It covers cracks and joints in the backing; it is flexible so does not crack even if the backing moves, and it slightly rounds corners so there are no places for dust or bacteria. Repairs can be made by spraying a piece of hardboard, by peeling the film off and cutting it to form a patch and letting this patch into the original surface. P.v.c. spray may also be used for tanking basements.

Plywood

WBP (weather and boilproof) plywood is suitable for most internal uses but, although the glues do not deteriorate under wet conditions, the wood may still be subject to the normal forms of timber decay. Therefore in places where the plywood is likely to be wetted fairly often as in bathrooms, it should be lacquered or, alternatively, a brand should be chosen in which each laminate is impregnated and bonded with a waterproof glue. Plywood can be faced with most sheet materials plastic, aluminium, stainless steel, galvanized steel, etc. This means that thin sheets of materials such as bronze

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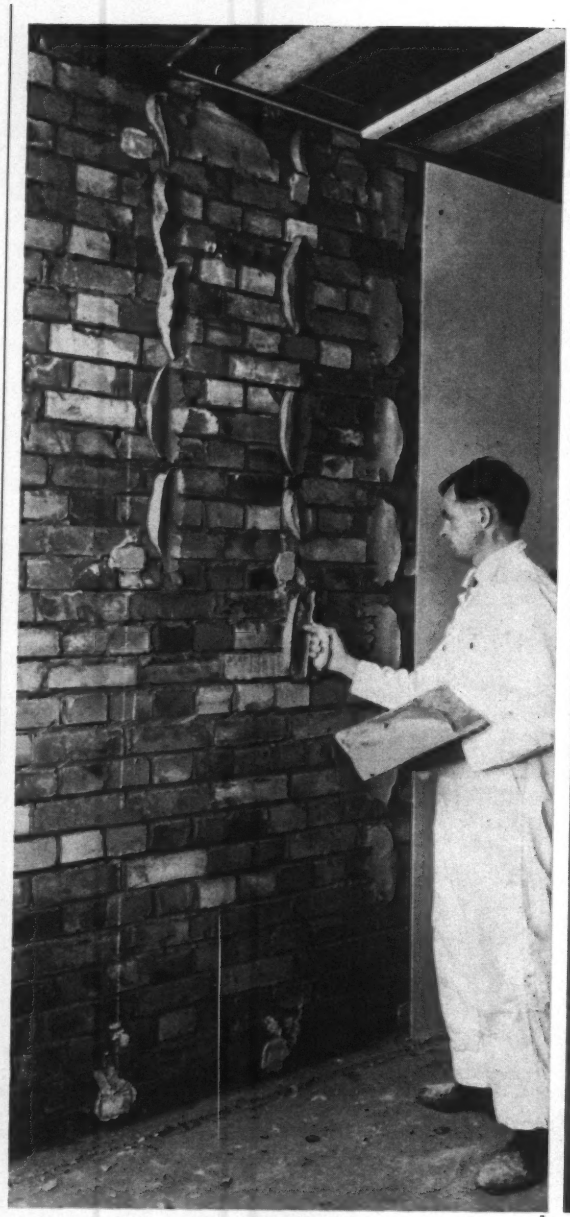

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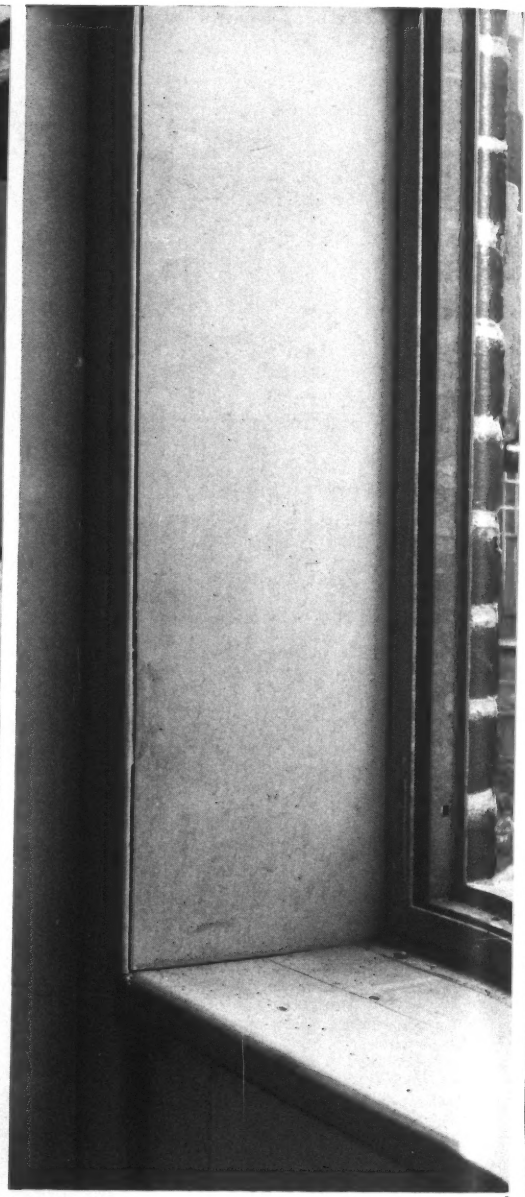

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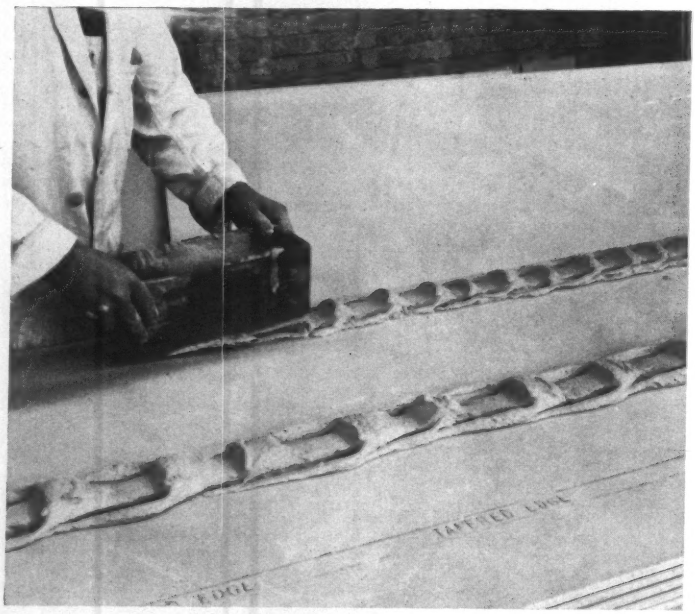

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1, *dry lining using the plaster dot system. The 'dots' are the small rectangular light coloured patches: the larger dabs which the workman is putting on are for securing the plasterboard.*

2, *detail of dry lining at window reveal.*

3, *the BRS method of dry lining, showing the use of a 'spreading box' for applying plaster ribbons to the back of the plasterboard. This photograph from BRS Digest No. 9 (second series) is published by permission of the Controller of HM Stationery Office.*

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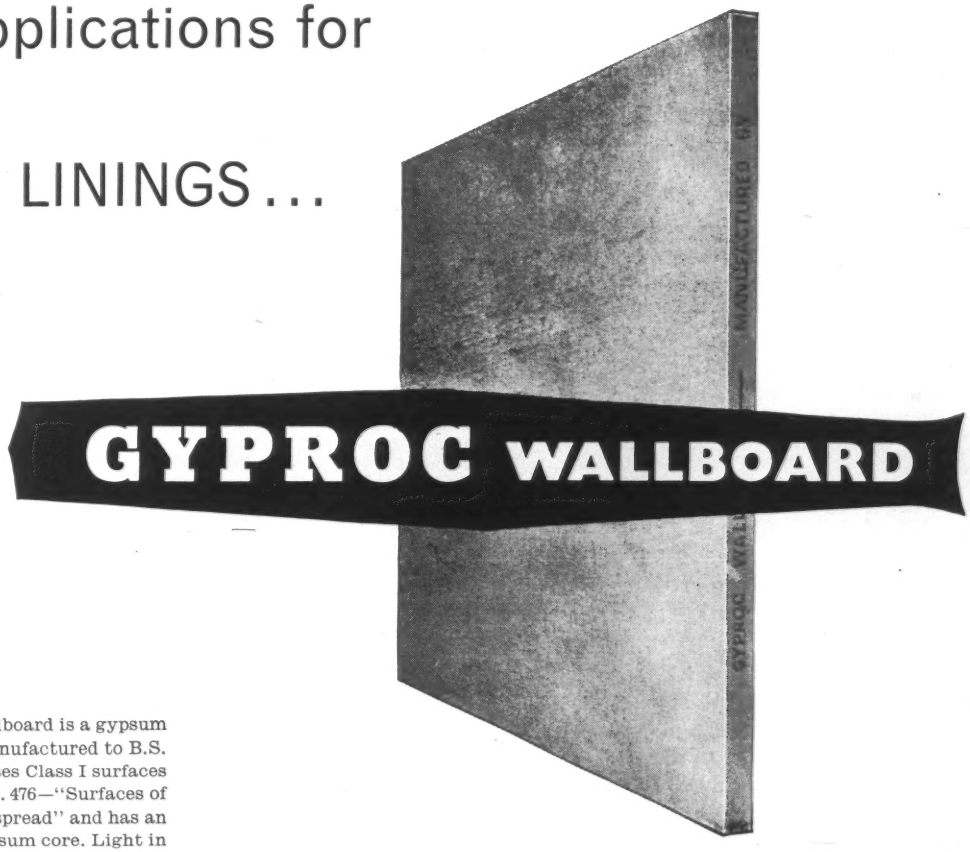

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continued from page 362]

or stainless steel, which are too expensive to use as solid panels, can be held rigid by the plywood backing to which they are bonded. Because differentials in moisture or thermal movement make composite sheets bend, it is good practice to face the plywood on both sides with the same material or cheaper material with similar properties. For example, if a sheet of plywood is faced with melamine, it should be backed with a cheap industrial plastic laminate.

Cement Glaze

Cement glaze is an alternative finish to tiling and initial cost is cheaper except on very small contracts. It consists of two brushed coats of white cement mixed with a patent hardener. A stipple coat is added in the same material; then two coats of cellulose are applied by spray. These are usually mottled to cover the rough stippled surface. This process is not as permanent as tiles, but the original (1934) application of this type of finish in the basement of the RIBA building is still serviceable. To-day a similar stipple cement glaze finish costs from 9s. per sq. yd. A smooth cement glaze finish is twice as expensive but gives a perfectly smooth finish.

Lacquers

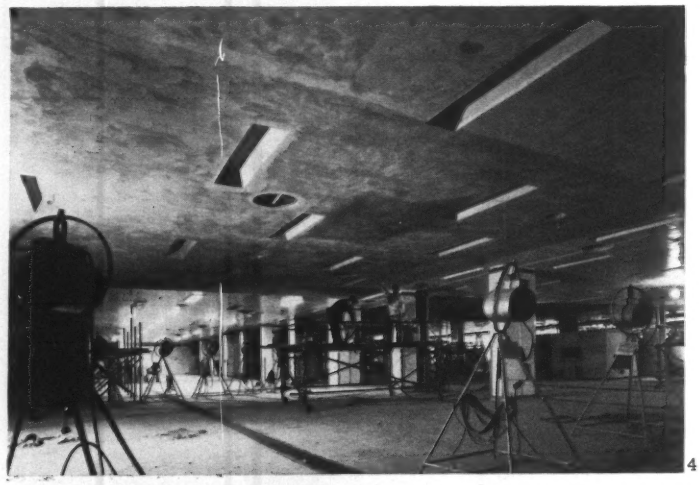
Plywood and timber internal finishes collect dirt and absorb moisture, but synthetic lacquers are now available to seal them. Urea-formaldehyde base lacquers give a waterproof finish of sufficient quality to be used for laboratory benches; the base and catalyst are mixed on site and have a pot life of about 20 hours. It is applied in three coats to give a gloss or satin finish at a price comparable with paint. Urea-formaldehyde lacquers break down under ultra-violet light. For this reason polyurethene based lacquers should be used in sunny positions and clear epoxy lacquers where there is risk of damage from alkalis. A disadvantage of synthetic lacquers is that, if left too long without redecorating, they craze and then have to be stripped before the application of a new coat.

Paint

The technology of paint is becoming increasingly complex and, if an unusual problem crops up, the architect must seek advice from the manufacturers. However, two new materials have recently arrived on the British market.

1. Multicolour. In the United States 'Zolotone' is a household word for a patent process of spraying paint so that a thick flecked coat is applied. Its chemical make up is not published but it presumably keeps the different coloured flecks from intermingling by including paints of different bases in the same spray. Since it is relatively thick it is often used to cover poorly made joinery and its spotty effect is usually brash; but its durability is undeniable. It is now made under licence in this country by a number of firms. These paints are similar in appearance to other flecked paints, but in these others the flecks are added to a dry background colour.

2. Tylex, a Tretol product, applied in three coats is a hard high gloss paint with a mixed synthetic base which can be applied direct to brick, concrete, plaster, etc. It is alkali resisting and is therefore not affected by lime in plaster or brickwork. Its finish is much harder than ordinary gloss paints so it soils less easily and the gloss survives frequent washing.



4

5

6

4, drying out a vermiculite plaster ceiling preparatory to applying a p.v.c. spray in the Heinz Factory at Wigan (architects, J. Douglass Mathews and Partners).
5, removing the masking at windows after applying the p.v.c. spray to the ceiling shown in 4. 6, the finished ceiling.

takes the lead . . . always

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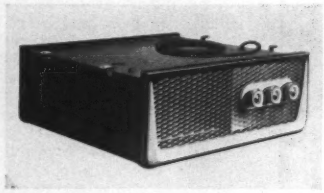
Association of Steel Conduit Manufacturers, 96 Hagley Road, Birmingham, 16.

THE INDUSTRY

Electric fan heater

The 'Tabulair,' 1, is a new electric fan room heater. It is thermostatically controlled, has low temperature heating elements and close mesh guards to protect all openings. This particular model, which has been much used in hotels, is for fitting to a piece of furniture such as a low table. It has four fixing lugs for screw fixing to the underside of the table. The unit has a two-heat control (1 kw and 2 kw) and a two-speed fan. The heater complies with BS 1670 : 1956. Retail price, including purchase tax, is £16 12s. 6d.
Tabulair Division, The Spiral Tube and Components Company Limited, Osmaston Park Road, Derby.



1

Pliable flue lining

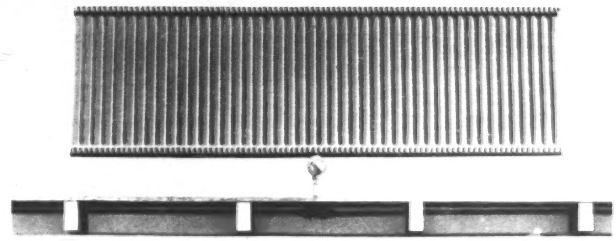
The lead lined pliable flue lining tube, 2, has the obvious advantage of being able to be inserted into an existing chimney stack with a minimum disturbance. Procedure for installation is to remove the terminal from the chimney and, if necessary, open the flue at the appliance position. A wooden plug (shown in the illustration) is inserted into one end of the lining tube to avoid excessive disturbance of soot, and a light rope attached. The rope is passed down the flue and the tube gently drawn downwards from below. At the same time it should be fed into the flue from above without the use of force. The tube is anchored by means of a clamp at the top and the gap which remains between tube and brickwork at each end sealed by means of plates before the terminal is replaced. The tube has been approved for flue lining by the Gas Council. To give an idea of cost, a 25 ft. long flue could be lined with a 5 in. diameter tube for around £35. Coils of up to 100 ft. are available in 3 in., 3½ in., 4 in., 5 in., 6 in., and 7½ in. diameters. Bending radius = 2½ times the diameter of the tube (taken at the centre line of the tube). Clamps and sealing plates, suitable for the whole range of Kopex flue lining tubes, are available in sizes to fit flues 12 in. by 12 in., 15 in. by 15 in., or 18 in. by 18 in. The wooden plugs are supplied with an axial hole for ease of attaching a rope.
Uni-Tubes Limited, 197, Knightsbridge, S.W.7.

Specifying wallpaper

A technical booklet which is likely to appeal to architects not only for the amount of useful information contained but also for the standard of presentation is a new publication by the Wall Paper Manufacturers Limited, entitled *Specifications for Wallpaper*. It contains interesting background information on modern methods of production and definitions of wallpaper types. It includes tables for estimating the number of pieces required. Most important of all, however, is the technical section which deals with the preparation of surfaces, notes on common faults—mould growth, pattern staining, slow drying, etc.—and a set of specifications. The booklet should be invaluable to architects and interior designers. It is a pity it is not to one of the accepted A sizes of paper.
The Wall Paper Manufacturers Limited, 19-21, Mortimer Street, London, W.1.

'One-pipe' radiators

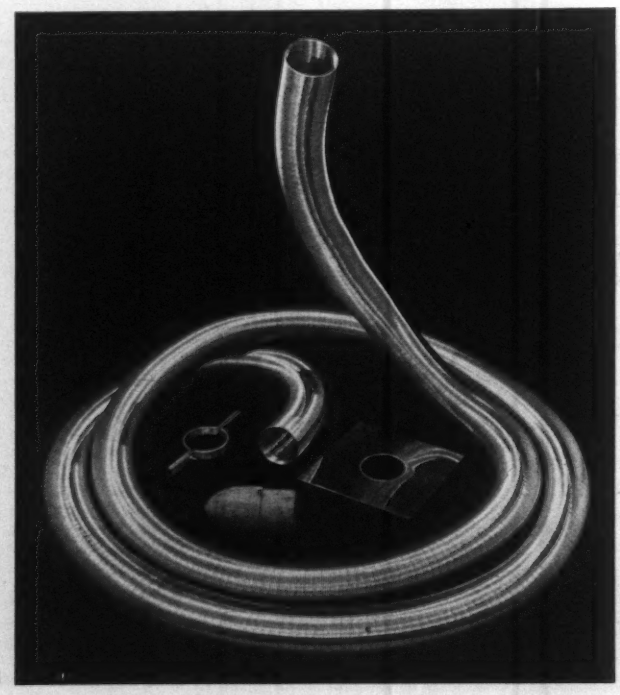
A welcome development in small bore heating is the new one pipe radiator system, 3, whereby there is only one connection to each radiator. This consists of a special tee piece and a variable control valve together with union and spacing piece, supplied complete and assembled with each pressed steel radiator. The plumber has only to install the ring main. The patented connector handles both the flow and the return of the radiator, the control valve giving variable control of the radiator temperature. The connector is supplied suitable for either surface or underfloor pipe runs. The manufacturers claim that the simplicity of installation reduces on site labour costs by as much as 40 per cent. Heat requirement and pipe size calculations are basically those used for conventional systems; surface area calculations are made in the normal way, flow to return temperature drop being of the order of 20 degrees F; circulating pump calculations are as standard practice, the connector having a resistance factor of 4.
Bekon Supplies Limited, Beaconsfield, Buckinghamshire.



3

Veneered chipboard

Corven veneered chipboard is available in a wide range of veneers, including afrormosia, gaboon, iroko, limba (white), limba (bariole), makore, oak (figured), sapele, sycamore, red agba, teak and African walnut. Details are as follows. Standard sizes (except for teak and sycamore) are 11 ft. 6 in. by 5 ft. 9 in. by 15, 18, and 24 mm. Teak and sycamore are available in 7 ft. by 5 ft. 9 in. by 20 mm., 5 ft. 9 in. by 4 ft. 4¾ in. by 20 mm. and 5 ft. 9 in. square by 10 and 12 mm. Density is 37.5 lb. per cu. ft. Moisture content 8-10 per cent. Fire spread is class 3 for the untreated material, but the manufacturers say that many surface applications (varnishes and paints) will provide class 1 protection. The manufacturers supply an edging strip which they describe as Woodtape Natural Veneer with adhesive backing. The following is a guide to cost: 11 ft. 6 in. by 5 ft. 9 in. by 18 mm. board having limba white face and first quality African mahogany reverse face 3s. 2d. per sq. ft. for a crate of six.
Williamson and Kay Limited, Holme Street, Liverpool, 20.



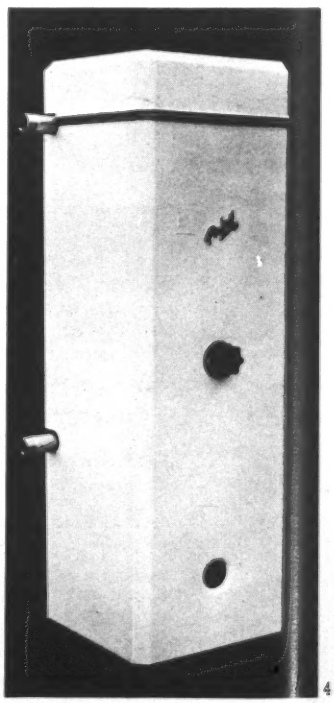
2

Packaged central heating

Baxi-Pak is a packaged small bore central heating system costing approximately £150 including complete insulation and a Baxi underfloor draught fire. The system is for whole house heating, designed to operate with a Baxi fire and back boiler of the tubeless type which does not require cleaning. The Baxi-Pak itself consists of a radiator output boiler, radiators (with brackets and blanking piece), towel rail and electric circulating pump. The cost of the Baxi-Pak for a 16 in. fire size with four radiators is £70 retail. For an 18 in. fire size, which includes an extra radiator, the cost is £76 10s. The Baxi patent underfloor draught fire costs between £10 14s. 6d. and £18 18s. 3d. according to size and type of ash disposal unit. Approximately £70 is estimated as the cost of piping and installation. The Baxi-Pak heating system can be used with the Baxi Burnall fire with lift out ash box which needs emptying once or twice a week, or any of the three continuous burning models—the Rotary Ashbox, outside ashbox or deep ash-pit where ash removal can be carried out while the fire is alight.
Baxi, Bamber Bridge, Lancs.

Small boiler

Perkins make two small boilers, called the Mini-Boiler 25 and the Mini-Boiler 50, having outputs, respectively, of 25,000 and 50 000 Btu/hr.



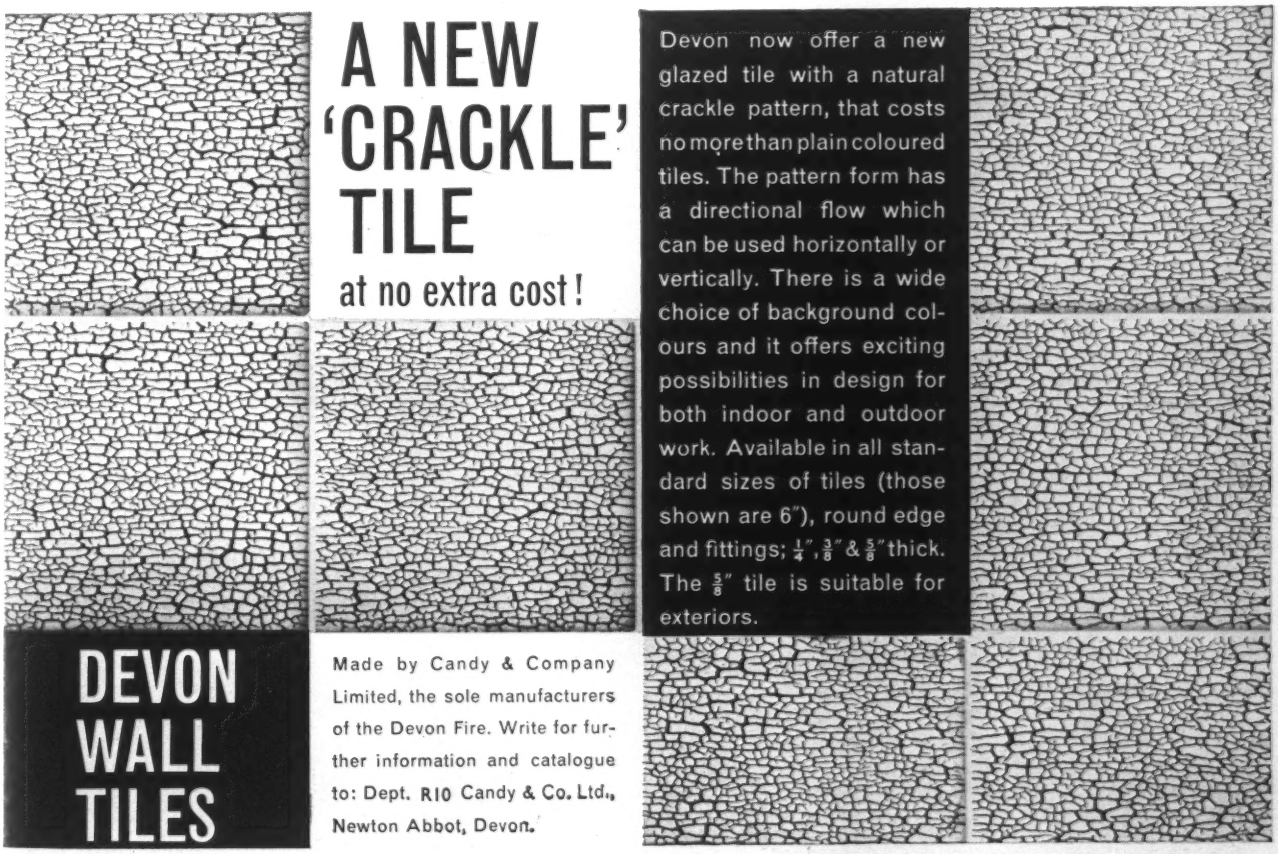
4

The Mini-Boiler 50, 4, is 36 in. high by 11 in. wide by 11 in. deep and is intended for wall mounting. The boiler is secured to an easily accessible sealed burner, which, being

the A P bathroom went for a burton . .

pity, it was a useful place to have for changing into one's
gladrags for an evening do in town. The room's working
harder now though - it houses the electronic machinery
dealing with the readers' enquiry service. Works well too.
Architects needing more information on products
advertised in the Review simply complete the enquiry form
at the back of each issue. Saves letter writing and
telephone calls, secretaries, stamps.
Forms slipped into the post go into the A P bathroom
where females press buttons and things, machines mutter and
punch and the sorted enquiries are sent off to advertisers.
All so quick and competent. No soap!
Use it?

Got a party on next Thursday - no time to go home and change.
Anyone in Westminster having spare bathroom, please communicate . .



A NEW 'CRACKLE' TILE
at no extra cost!

Devon now offer a new glazed tile with a natural crackle pattern, that costs no more than plain coloured tiles. The pattern form has a directional flow which can be used horizontally or vertically. There is a wide choice of background colours and it offers exciting possibilities in design for both indoor and outdoor work. Available in all standard sizes of tiles (those shown are 6"), round edge and fittings; $\frac{1}{4}$", $\frac{3}{8}$" & $\frac{5}{8}$" thick. The $\frac{5}{8}$" tile is suitable for exteriors.

DEVON WALL TILES

Made by Candy & Company Limited, the sole manufacturers of the Devon Fire. Write for further information and catalogue to: Dept. R10 Candy & Co. Ltd., Newton Abbot, Devon.

sealed, eliminates the risk of fumes within the room in which the unit is installed. The cabinet is intended to be built into the brickwork of an outside wall. A hinged, slotted cover on the outside wall allows easy access to the whole of the interior. When operating, fresh air for combustion is drawn into the pressure chamber through the louvres in the back cover by an electric fan. An adjuster maintains the correct flow of air to the sealed burner. Used air is driven out through an exhaust outlet. The unit is obtainable with either a white or bronze stove enamelled cover and price is £63 10s.
Perkins Boilers Limited, Mansfield Road, Derby.

Electric clocks

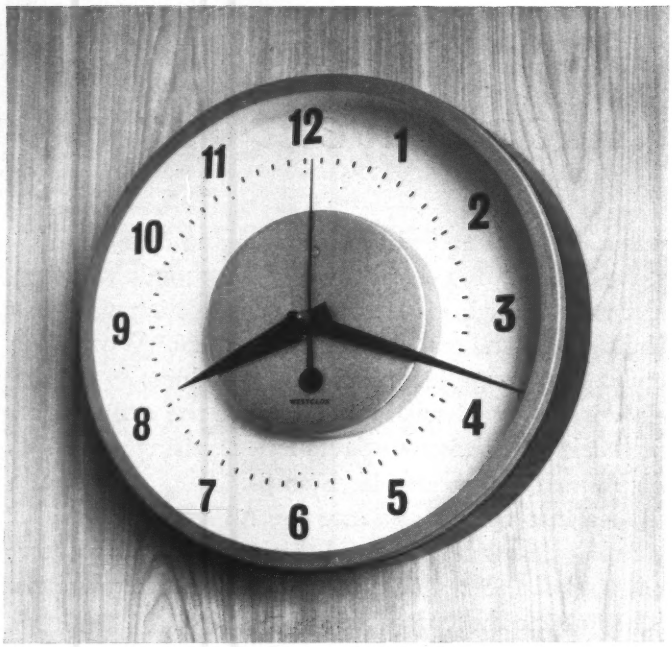
Westclox have recently introduced a range of self-starting commercial electric wall clocks of 10 in. and 12 in. diameters suitable for offices, factories, banks, schools, hospitals, hotels, etc. The Executive 10, 5, is a competent design which is available with either black dial and white hands and numerals or white dial and black hands and numerals. It has a black plastic case which fits flush to the wall and is recessed at the back to take cord and plug. The movement is self-starting with a 210-250 volt AC 50 cycle, 3 watt motor. Price is £6 12s.
Westclox Limited, Strathleven, Dumbarton, Scotland.

Swiss boiler

Hoval Boilers, which are Swiss designed, are now to be manufactured in this country. The model now available, is the Hoval TKS which is a combination oil-fired boiler (providing also domestic hot water) and incinerator for dry refuse. It is possible to change from oil-fired to solid fuel fired without modification. The unit is available in sizes ranging from 80,000 to 1,600,000 Btu/hr. output.
*Hoval Boilers (UK) Limited, Kirkman House, 54a, Tottenham Court Road, London, W.*1.

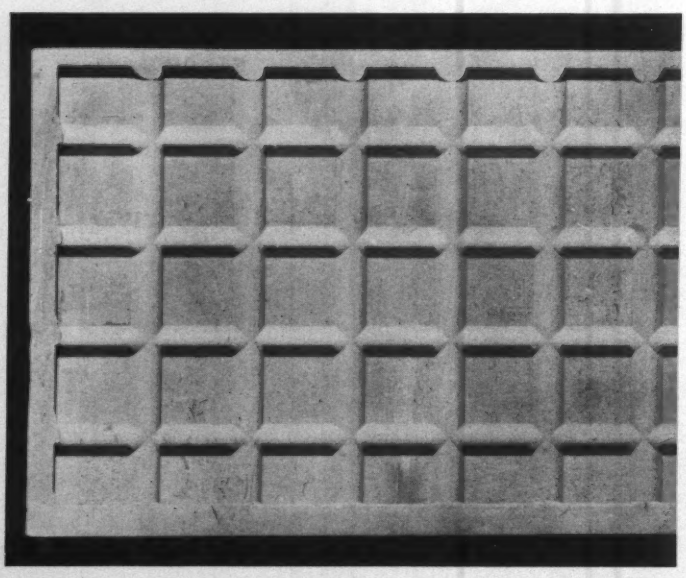
Textured stone

One feels that the manufacturers of natural building stone have only themselves to blame for the neglect



5

of this material by the younger generation of architects. An exception is the Stone Firms Limited (formerly the Bath and Portland Stone Firms Limited) who have done a good deal recently to put forward the design potential of this traditional material. The illustration, 6, is an example of machine patterning of natural stone (in this case Portland). This sort of thing can be carried out in Roach, Whilbed and Basebed in their various grades, although stones from particularly shelly tiers are liable to have rough arrises due to shell or voids. Single slabs 4 in. or 5 in. thick can be machined to 6 ft. by 4 ft. maximum size; where only 3 ft. square panels or smaller are required 3 in. thick stone may be used. Various basic patterns can be produced and these can be adapted for the most part to architects' individual requirements.
*The Stone Firms Limited, Vincent House, Vincent Square, London, S.W.*1.


6

CONTRACTORS etc

Undergraduate Rooms, Brasenose College, Oxford. *Architects:* Powell and Moya. *General contractors:* Norman Collisson (Contractors) Ltd. *Sub-contractors: Stonework:* The Bath & Portland Stone Firms Ltd. *Pre-cast concrete:* Woolaway Concrete Products Ltd. *Windows:* Williams & Williams Ltd., Quicktho Engineering, Wessex Guild Ltd. *Staircases:* Victoria Joinery Ltd. *Balustrading, railings and ironwork:* Wessex Guild Ltd. *Felt roofing:* The Prater Asphalte Co. *Sanitary fittings:* Alfred Goslett & Co. *Ironmongery:* Alfred G. Roberts Ltd. *Electrical installation:* Duncan Watson (Electrical Engineers) Ltd. *Heating and hot water installation:* Norbeth Building Services Ltd.

Bank in Lombard Street. *Architects:* Brett, Boyd & Bosanquet. *General contractor:* Trollope & Colls Ltd. *Sub-contractors: Stainless steel entrance doors:* Morris Singer Ltd. *Marble and polished teak:* J. Whitehead and Sons Ltd. *Lift cage:* Evans Turner Ltd. *Lift interior:* Otis Elevators Ltd. *Narthex floor and walls:* Art Pavements & Decorations Ltd. *Narthex dome and Colonnade columns, vaults and walls:* W. B. Simpson & Sons Ltd. *Statue plinth:* Bow Slate & Enamel Co. *Laylight over banking hall:* Courtney Pope (Electrical) Ltd. *Manager's room:* Heal's Contracts. *Manager's dining room:* Cole & Son (Wallpapers) Ltd.

Three Restaurants for Bank Staff in the City. *Architects:* Everson and Searles, in conjunction with the Bank's assistant controller, premises department and maintenance staff (director, J. Raphael). *Threadneedle Street canteens. Joinery:* Holloway Bros. Ltd.; T. Rider & Son Ltd.; Westminster Bank Ltd. *Electrical installation, painting and plumbing:* Westminster Bank maintenance staff. *Acoustic ceiling:* Hermeseal Acoustics Ltd. *Main tungsten lighting:* Courtney Pope Ltd. *Cafeteria furniture:* Morris of Glasgow. *Other furniture:* Ernest Race Ltd.; Pel Ltd. *Curtains:* Heals Contracts Ltd. *Linoleum:* Linoleum Manufacturing Co. *Photographic murals:* Minerva Art and Photographic. *Venetian blinds:* John Hull & Sons.

Head Office, Lothbury. Joinery: T. Rider & Son Ltd. *Electrical installation, painting and plumbing:* Westminster Bank maintenance staff, Head Office, Lothbury. *Acoustic ceiling:* Hermeseal Acoustics Ltd. *Main tungsten lighting:* Courtney Pope Ltd. *Special tungsten lights over kitchen area:* Atlas Lighting Ltd. *Cafeteria furniture:* Morris of Glasgow. *Curtains:* Heals Contracts Ltd. *Linoleum:* Linoleum Manufacturing Co. *Plastic worktops and wall surfaces:* Formica Ltd. *Photo murals:* Enlargement by Minerva Art and Photographic Service Ltd. *Venetian blinds:* John Hull & Sons. *Electrically operated folding screen:* E. Pollard & Co.

House at Kingston Hill, Surrey. *Architect:* Kenneth Wood. *General contractor:* Thorogood & Sons Ltd. *Sub-contractors: Structural frame:* Wadcrete Ltd. *Roofing:* Roberts Adlard Ltd. *Timber facings:* Hazelby Ltd. *Bricks:* Ibstock Brick & Tile Co. *Insulation blocks:* Thermalite Y-Tong Ltd. *Pressure impregnation:* Hickson's Timber Impregnation Co. *Flooring (hardwood strip):* Horsley Smith Ltd.; *(mosaic & tiling):* Denis Williams Ltd.; *(linoleum):* Thames Flooring Co. *Olive green stone hearth:* Broughton Moor Stone Co. *Terrazzo benchtops:* Kendellstone Co. *Sanitary fittings:* Adamsez Ltd., Shanks Ltd., Fisholow Ltd. *Door and window furniture:* Alfred G. Roberts Ltd. *Double glazing:* Hollowseal Glass Co. *Lighting fittings:* Frederick Thomas Ltd., G. B. Forrest, Atlas Lighting. *Paints:* Hadfields Ltd. *Timber sealers:* Floor Treatments Ltd., Mander Bros. Ltd. *Joinery, windows:* Thorogood & Sons Ltd.

House at South Hill Park, Hampstead *Architect:* Michael Brawne. *Quantity surveyor:* G. A. Hanscomb. *General contractor:* Broadlands (Builders) Ltd. *Precast floor units:* Concrete (Southern) Ltd. *Nuralite roofing:* J. J. Ettridge Jnr. Ltd. *Electrical:* D. G. Pamplin. *Louvres:* N. V. Appleton Pty. Ltd. *Linoleum flooring:* The Limmer & Trinidad Lake Asphalt Co. *Paint:* Hadfields. *Varnish:* I.C.I. Paints Ltd. *Wood preservative:* Xylamon Stay-Brown. *Ironmongery:* Alfred G. Roberts Ltd. *Sanitary fittings:* Stitsons Sanitary Fittings Ltd. *Bricks:* Henry J. Greenham Ltd.

House in Hampstead. *Architects:* Jellicoe, Ballantyne & Coleridge. *General contractor:* James Carmichael (Contractors) Ltd. *Sub-contractors: Heating:* Young, Austen & Young Ltd. *Copper roof, plumbing:* Arthur Scull & Son Ltd. *Slate facing:* Bow Slate and Enamel Co. *Flat roof structure:* H. Newsum Sons & Co. *Felt roofing:* D. Anderson & Son Ltd. *Pile foundations:* Cementation Co. *Metal windows:* The Morris Singer Co. *Garage doors:* Bolton Gate Co. *Terrazzo and mosaic:* Malacarp Terrazzo Co., Diespeker & Co. *Marble fireplace and shelving:* Art Marbles, Stone & Mosaic Co. *Ironmongery and metal work:* A. J. Binns Ltd. *Lighting fittings:* Frederick Thomas Ltd. *Kitchen fittings:* Heal's Contracts Ltd. *Flush doors:* W. W. Howard Bros. Ltd. *Gardens:* William Wood & Son Ltd.